The Council of Industrial Desire

October (959 No 130 Price)

Design







The new G.E.C. display lighting fittings are more attractive, more effective. A wide choice of modern designs meets the ever-changing challenge of modern display techniques.

The complete new range is fully illustrated with technical details in Catalogue F4571. Please send for your copy.



THE GENERAL ELECTRIC CO. LTD., MAGNET HOUSE, LONDON, W.C.2

G.E.C.



Eee . . . it's wet!

So deliciously, clingingly wet that it has taken the young lady's breath away. And yet, this wetness of water is relative. For many modern industrial processes to be fully efficient, water must be made wetter still by breaking down the surface tension, so that it flows easily into every tiny crevice and soaks in thoroughly.

Marketing and advising on the use of products that make water wetter is the main preoccupation of the Shell Chemicals' Detergents Department. By far the best known and most widely used industrial liquid detergents are the 'Teepol' range. Together with the nonionic 'Nonidet' products, they have scores of applications throughout industry both for cleaning and maintenance and wherever wet processing is involved. 'Lensex' detergents,

another Shell commercial range, are specially made for textile scouring and commercial laundering.

Today Shell are not only the biggest producers of wetting agents and synthetic detergents (anionic and nonionic) for industry but they also supply the basic materials and intermediates used in the manufacture of many of today's household washing and cleaning products.

If you have any task involving wet processing, or if you have any problems concerning the use of chemicals, industrial or agricultural, Shell will probably be able to help you. It's easy to find out.

Write to the Sales Promotion Manager, Shell Chemical Company Limited, Marlborough House, 15-17 Gt. Marlborough Street, London, W.1.

YOU CAN BE SURE OF SHELL CHEMICALS



DESIGN is important...



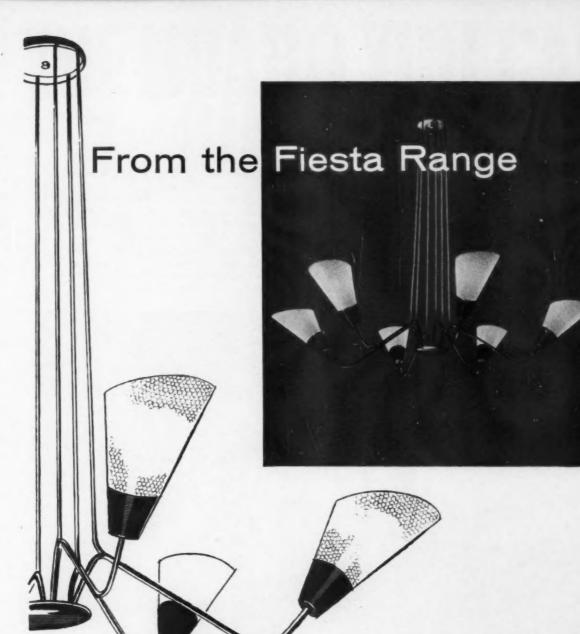
be right from the start
with STAINLESS STEEL



Technical literature is available on request

FIRTH-VICKERS STAINLESS STEELS LTD., SHEFFIELD

is the only Company in Europe to devote its activities exclusively to the production and development of stainless and heat-resisting steels.



Top designers have worked to create this striking range of fittings. The great variety of ceiling and wall units gives a wide choice of beautiful, well-constructed fittings to suit every style of modern interior.

Write for fully illustrated catalogue to any of the Company's offices or to



A.E.I. LAMP AND LIGHTING CO. LTD HEAD OFFICE: MELTON ROAD, LEICESTER

M 4815

THE CEILING THAT LIGHTS

at Qantas Airways Office

Here is lighting in keeping with the architectural requirements of the jet age. For the impressive offices of Qantas Airways, architects Yates, Cook and Darbyshire specified an uninterrupted area of nearly 800 sq ft of Lumenated Ceiling. It provides glare-free, shadowless lighting of the chosen intensity, and approaches natural daylight in quality. The Lumenated Ceiling is designed to look attractive whether the light is on or off. Fitting in perfectly with modern building styles, it also offers an attractive method of modernising old interiors, giving a handsome new ceiling at a lower level. Overhead beams, pipelines and other services can all be effectively screened by the translucent diffusing medium. Lumenated Ceilings are backed by a comprehensive after sales maintenance service.



Full information from LUMENATED CEILINGS LIMITED or all branches of the General Electric Co. Ltd.

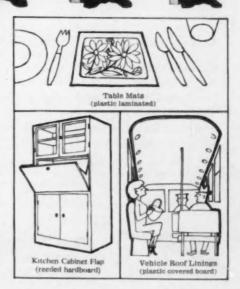
LUMENATED CEILINGS LIMITED

ALLIANCE HOUSE, CAXTON STREET, S.W.1. Telephone: ABBEY 7113

TGA L71

THE BOARD YOU CAN BUY IN ALMOST ANY SIZE

If you want Bowater Board in a standard size—including the very economical 5ft. widths—we can supply it at a moment's notice. We also have the resources to cut to non-standard sizes for reasonably long runs. Being a British firm, we are able to meet all delivery dates scrupulously and if necessary gear them to your production cycle. Bowater Board can be bent (to a 1" radius if need be) and blanked out to almost any shape without splitting or losing its smooth working surface. Decorative possibilities range from a P.V.C. finish to stove-enamelling or veneering. Here we show three examples of products—of vastly different sizes—in which Bowater Board has replaced traditional materials.





Like a booklet and some samples to start you thinking? Write to: Imagine how you could use

Bowater Board

BUILDING BOARDS DIVISION, BOWATERS SALES COMPANY LIMITED BOWATER HOUSE, KNIGHTSBRIDGE, LONDON SWI. TEL: KNI 7070

CRC 63B1



Specially designed for the secretary-typist . .





An ATTRACTIVE ADDITION to the Arclight range of fine wood office furniture.

The pedestal consists of one deep drawer with various compartments for paper envelopes, boxed carbon papers and pin tray. In addition, one boxed drawer (inside dimensions 12" wide by 15" back to front and 4½" deep) for personal use, fitted with barreltype lock. There is a pull-out slide at the top of the pedestal. The top is an oak veneered panel inserted in solid oak framing with fully radiused corners. The legs are fitted with square flushed brass ferrules. The whole unit is soundly constructed from selected well-seasoned timber, stained and polished standard light oak, medium oak or medium-dark oak.

REFERENCE NUMBER §202/350 OVERALL SIZE $48'' \times 27'' \times 28''$ HIGH PRICE £21 . O . O PLUS 14/4d, PURCHASE TAX

For further information about Arclight fine wood office furniture write or telephone –

E. N. MASON & SONS LTD

ARCLIGHT WORKS · COLCHESTER · ESSEX TELEPHONE: COLCHESTER 5191

The stationery drawer designed for cleanliness and efficiency – full protection of contents with instant accessibility

Registered design

LONDON · GLASGOW · MANCHESTER · BIRMINGHAM · LIVERPOOL · SHEFFIELD · LEEDS · BRISTOL



People judge you by the cutlery you keep



"I do care what people think, when they come to my house!"

"I like things to be just so, especially when guests are coming. Peter never stops teasing me about it-but any woman would understand. When guests admire our Sanenwood Cutlery, it's marvellous to know that they'll never see more elegant cutlery-anywhere! Oh wellthat's a woman's point of view. But men need more solid reasons for paying extra, and here they are! All handles are of Sanenwood - the unique moulded wood with a grained beech finish-elegantly, intelligently designed to make the cutlery a pleasure to hold. Sanenwood is so tough—it's virtually impossible to hurt with scalding water, greases or household chemicals, and it's so easy to wash up too. The "business

polished, Sheffield stainless steel. Just one thing more-in fairness to yourself, don't buy any other cutlery until you've handled a set of Sanenwood."

SUPERB

Sanenwood

CUTLERY

end" of Sanenwood Cutlery is in finest mirror- Made by SANENWOOD PRODUCTS LTD · HOYLE ST · SHEFFIELD 3.



THIS is the point-of-sale

IN FRONT OF THE EYES parades an endless procession of advertising messages. From paper and periodical, large and small screen, poster and point-ofsale . . . hundreds of messages clamouring for attention every day.

Of course, these eyes only register a few of the many attempts to capture attention. And this is where screen printing comes into its own. Screen printing gives the vivid colour that catches the eye, the contrast that makes your product point-of-sale stand out, the clearness that gets the message across. What the eye doesn't see is that screen printing is quicker and cheaper.

The original, the superbly produced, the excitingly different . . . these are the advertising messages that compel attention. The kind that Priestleys take pride in producing - the kind that penetrates the pointof-sale and sells.

PRIESTLEYS

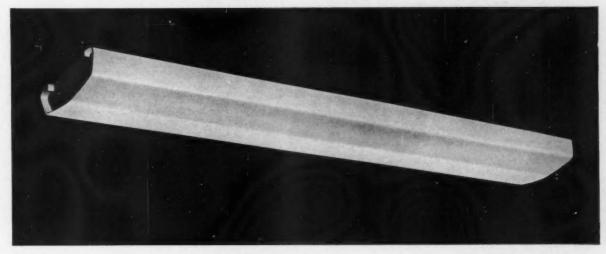
A MEMBER OF EUROPEAN STAND FITTING AND SCREEN PRINTING SERVICES

for visual presentation

LONDON OFFICE: 22 BUCKINGHAM STREET, W.C.2 TRAfalgar 4277/8

ALSO AT: GLOUCESTER · BIRMINGHAM · CHELTENHAM CARDIFF · MANCHESTER

new-elegant-blended lighting



Designed for store, shop and office lighting the new Atlas KE/KI fittings offer fluorescent and a successful blending of tungsten and fluorescent lighting in fittings of extreme elegance. The delightful cross section appearance is a particularly pleasing feature. Wherever circumstances require that both fittings and lighting attain the highest standards of quality, Atlas KE/KI are an ideal choice.

KEQ/2080/KE25 clean, elegant design, with extruded opal 'Diakon' diffuser over rich red end panels. Spring-loaded bi-pin lampholders; quickstart control gear. Takes two 5 ft. 80w. tubes; List Price £16-5-4 + £1-12-1 p. tax.



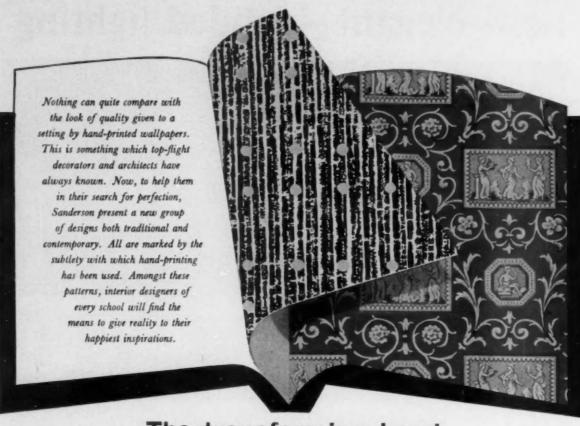
KIQ 2080: combines fluorescent with two tungsten downlights for added sparkle. Opal 'Perspex' diffuser with black end panels. Houses two 5 ft. 80w. tubes, two 100w. filament lamps and quick-start gear. List Price £23-4-6 + £2-15-8 p. tax



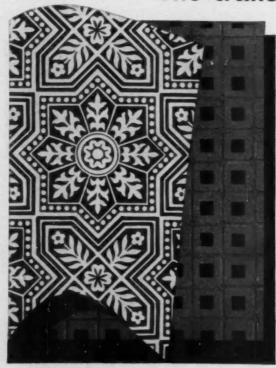
KI 2040: a smaller version of KI 2080, supplied as a complete pack, using two 4 ft. 40w. tubes and employing two Atlas patented starter/ballast lamps in place of conventional lamps and gear. Opal 'Diakon' diffuser with metallic red end panels. Low initial cost makes it ideal for smaller shops and offices. List Price £9-17-4 + £1-14-8 p. tax. Complete with tubes and ballast lamps.

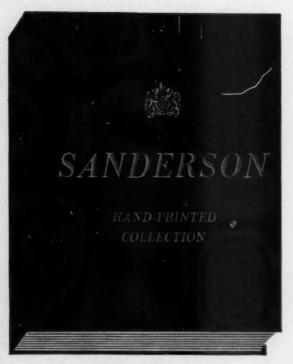
atlas ke and ki fluorescent fittings

ATLAS LIGHTING LIMITED, THORN HOUSE, UPPER ST. MARTIN'S LANE, LONDON, WC2
A subsidiary company of Thorn Electrical Industries Ltd.









ARTHUR SANDERSON & SONS LTD., BERNERS STREET, LONDON, W.1

AND AT GLASGOW, EDINBURGH, LEEDS, MANCHESTER, BIRMINGHAM, EXETER, BRISTOL, SOUTHAMPTON AND BRIGHTON

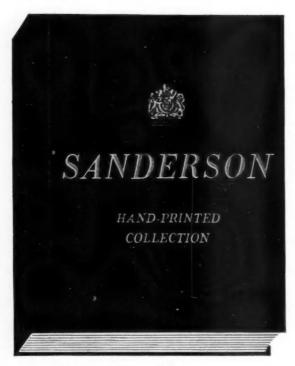
For long-running mass-production plastic mouldings in any material it certainly pays to 'leave it to Lorival'

LORIVAL PLASTICS UNITED EBONITE & LORIVAL LTD LITTLE LEVER NR BOLTON - LANCS

Nothing can quite compare with the look of quality given to a setting by hand-printed wallpapers. This is something which top-flight decorators and architects have always known. Now, to help them in their search for perfection, Sanderson present a new group of designs both traditional and contemporary. All are marked by the subtlety with which hand-printing has been used. Amongst these patterns, interior designers of every school will find the means to give reality to their happiest inspirations.

The transforming hand



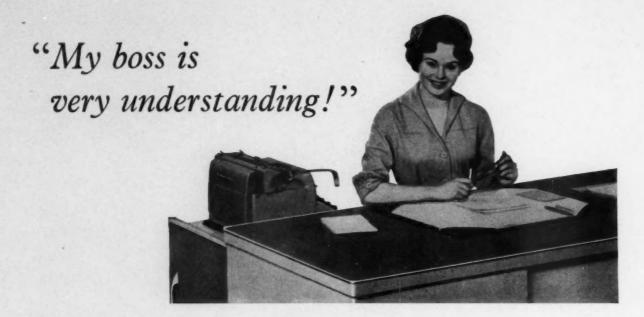


ARTHUR SANDERSON & SONS LTD., BERNERS STREET, LONDON, W.1

AND AT GLASGOW, EDINBURGH, LEEDS, MANCHESTER, BIRMINGHAM, EXETER, BRISTOL, SOUTHAMPTON AND BRIGHTON

LORIVAL PLASTICS - UNITED EBONITE & LORIVAL LTD - LITTLE LEVER - NR BOLTON - LANCS

For long-running mass-production plastic mouldings in any material it certainly pays to 'leave it to Lorival'



"I'm his secretary. He's found the ideal desk for my job—plenty of desk space, with a delightful glare-free working surface.

"And when I want to type, my machine comes up from its cupboard at the touch of a finger—even when using an electric model. It is stowed away just as easily.

"The drawers simply glide; three small, or one small and one large, with suspended filing in the latter if desired, and trays for pins and things in the centre drawer.

"Lovely finish, like a new car, in colours to tone with my office."

To get the best out of your secretary, you really should get her a



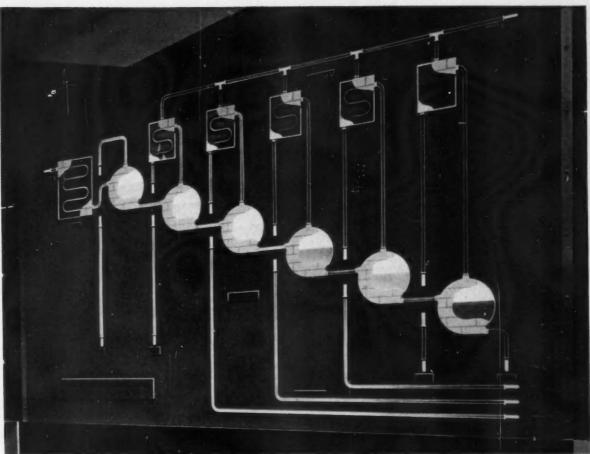
HARVEY

SECRETARIAL DESK

Please ask for details of the complete range of Office Furniture, which embraces:

SINGLE AND DOUBLE PEDESTAL DESKS, BOOKCASES, FILING CABINETS, CUP-BOARDS, TABLES, PARTITIONING, etc.

G. A. HARVEY & CO. (LONDON) LIMITED
Woolwich Road, London, S.E.7. GREenwich 3232 (22 lines)



This is a 6' x 4' animated display panel made of 'Perspex' by Pennant Display and Engineering Ltd., Cheltenham, for Shell Mex & B.P. Limited. It is one of four used to demonstrate the complicated process of oil-refining.

'Perspex'shows how an oil-refinery works

How best can one explain a difficult problem or a complicated process? Often, as Shell Mex & B.P. found, the best way is by an animated display. And an excellent material for an animated display, is 'Perspex' acrylic sheet.

'Perspex' is extremely easy to shape and handle-even large and intricate animated displays can be made. It is very tough, light and long lasting. Because of its clarity 'Perspex' is particularly suitable for displays where transparency is required. 'Perspex' is available in a wide range of transparent, translucent or opaque colours. 'Perspex' will withstand weather conditions in any part of the world. Modern designers use this durable, attractive material for many applications either in or out of doors.



'Perspex' is the registered trade mark for the acrylic sheet manufactured by I.C.I.

IMPERIAL CHEMICAL INDUSTRIES LIMITED . LONDON . S.W.

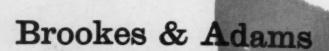




two colour process

designed for stacking

FIESTA lamine



EIGHTEEN EDMUND STREET BIRMINGHAM 3

Sequoia

by Lucienne Day

from the 1959 collection

HEAL fabrics

HEAL FABRICS LTD., 196 TOTTENHAM COURT ROAD, LONDON, W.1. TELEPHONE; MUSEUM 1666



Designers! Manufacturers! Retailers! Do you know that



Royalite NITRILE THERMOPLASTIC SHEET

IS NOW AVAILABLE IN BULK (smooth or grained)

No more restrictions, no more holding back—there's enough for everybody!

For the first time in two years, there's Royalite in plenty. Now designers can insist on Royalite for their designs, manufacturers can go ahead and make in Royalite, while retailers can look forward to buying articles to sell to customers who want things to be made from Royalite—the most tested, colourful, versatile and economical plastic material of them all.

As from today, there's an even bigger market waiting to be tapped. More and more applications are being found for Royalite, which means that very soon, more and more customers will be getting the benefits from Royalite in one form or another. Time is precious, let's get to work!

Here's one of a thousand everyday applications in which Royalite excels

A food tray must be odourless. It must not absorb foreign odours, and it must be capable of withstanding varying temperatures. These are some of the reasons why U.S. Royalite was particularly chosen for this application. Others are its exceptional light weight—about 40% that of aluminium—its resistance to impacts, cuts and abrasions, and its amazingly low production cost.

The Royalite field of applications is continually expanding

Here are some recent additions . . .

PACKAGING & MATERIAL HANDLING

Boxes Trays Holders Precision containers Displays

CASINGS & HOUSINGS

Instrument cases
Partitioned boxes
Equipment cases
Housings for precision
equipment
Office equipment casings

LUGGAGE

Business luggage Lightweight luggage

ELECTRICAL

High line protectors Control panels Electrical housings Radio outer casings

MISCELLANEOUS

Air-conditioners Knife boxes Food trays

We've an idea Royalite can help you Write now for Royalite literature to address below:—



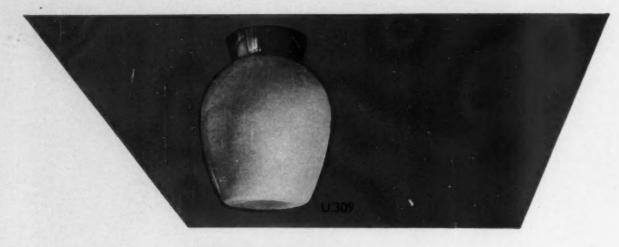
U. S. Rubber

Home: The North British Rubber Company Limited, 204/208, Tottenham Court Rd., London, W.I. MUSeum 5460 Export: U.S. Rubber International (Great Britain) Ltd., 62/64, Horseferry Road, London, S.W.I. ABBey 2053



An exclusive range of rotaflex EXCITING LIGHTING for architectural and display purposes

If you cannot visit the rotaflex showrooms at 4 Conduit Street, London W.1 write for full details



Step by Step

With appearance, installation and maintenance so carefully considered at the design stage, there is a triple trust in Troughton & Young's fine fittings.

Troughton & Young (Lighting) Ltd., 143, Knightsbridge, London, S.W.1. Tel: KENsington 3444 and at Rodney Street, Liverpool 1.

fine lighting fittings



Fabrics Afloat



BY APPOINTMENT
MAKERS OF OLD GLAMIS FURNISHING AND
EMBROIDERY FABRICS TO
H.M. QUEEN ELIZABETH THE QUEEN MOTHER

OLD GLAMIS FABRICS

This officer's cabin in the new Union-Castle liner, Pendennis Castle, is enriched by the glowing colour and pattern of Old Glamis fabrics. The curtains and bedspreads of FALL printed linen and chair covers of STRATHEDEN weave and



many other designs were produced in special colours for use on this ship.

The creation of exclusive fabrics for important contracts is a feature of the Old Glamis service to architects and decorators who are always welcome visitors at the London and Dundee showrooms. Here the entire range of Old Glamis fabrics including patterns not normally displayed or available for general sale on the home market, can be seen in quiet, pleasantly decorated surroundings.

Please ask to see pattern books of the Old Glamis range in your local Furnishing store. If this is not possible we will gladly have the range brought to your office, studio or shop.

DONALD BROTHERS LTD., THE OLD GLAMIS FACTORY, DUNDEE, Dundee 8,263/4 and ROXBURGHE HOUSE, 287, REGENT STREET, LONDON, W.I., MAYfair 1126/7.



Mine cars made from SCW Cor-Ten (Photograph by courtesy of the National Coal Board)

Where advantage can be taken of its high yield strength and corrosion resistance, SCW Cor-Ten can always effect a substantial cost saving.

Whatever the application (and the range continues to grow) SCW Cor-Ten is able to offer an unchallengeable combination of economy and efficiency.

COR-TEN SAVES MONEY

- Initial costs are spread over a longer service life
- Maintenance costs are reduced
- Operating costs are lowered—in transport applications payloads are bigger because of reduction in tare weight

Please write to us at the address below for further information or for technical assistance in the application of SCW Cor-Ten to your products

Cor-Ten



RAILWAY ROLLING STOCK
AGRICULTURAL & EARTH-MOVING EQUIPMENT
MINE CARS · POWER STATION INSTALLATIONS
BARGES AND SMALL CRAFT

THE STEEL COMPANY OF WALES LIMITED

ABBEY WORKS, PORT TALBOT, GLAMORGAN TELEPHONE: PORT TALBOT 3161



"Twitterton! Is this really FORMICA?"

Can it really be? Plastics piping made by formica? Many people get confused about this...thinking formica is only a household name for decorative laminates. Actually it's the name of a Company who manufacture a great many first rate products. Plastics piping for instance. Formica's plastics piping has overcome every major disadvantage of metal. And the other formica extruded plastics products too, are opening

exciting new projects every day; formica plastics containers for attractive see-through packs for toothbrushes and cosmetics...formica extruded rod for shock-proof screw-driver handles.

If you're interested in any type of extruded plastics be it piping, containers or rod, please write for full information and remember

FORMICA

make

DECORATIVE LAMINATES
INDUSTRIAL LAMINATES
EXTRUDED PLASTICS



For full information on any FORMICA product please write to:

FORMICA LIMITED, Extruded Plastics Division, Cavendish Works, Buckhold Road, Wandsworth, S.W.18.

Tel: VANdyke 7202 * FORMICA is a registered trade mark.

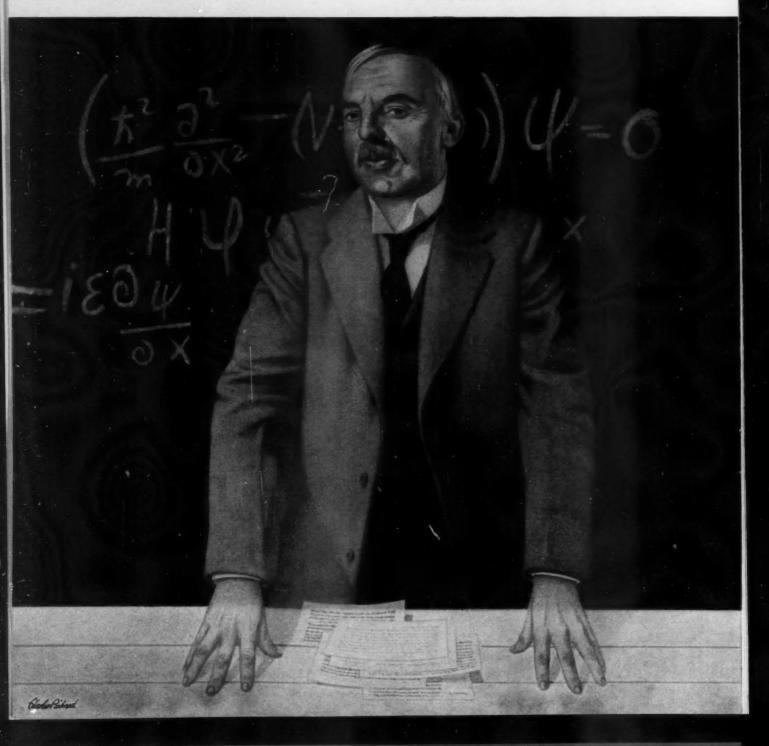
CHAIR SETS

ANCESTORS OF AN INDUSTRY

LORD RUTHERFORD, one of the great pioneers of atomic physics, put forward in 1911 the revolutionary theory that all atoms have a central core or nucleus that accounts for almost the entire weight of the atom. This nucleus, he announced, is surrounded by one or more electrons revolving in orbits. Research under Rutherford's direction showed that the nucleus of any atom consists of a positively charged proton and an electrically neutral particle, the neutron. Further research showed that it was possible to transmute one element into another by chipping off part of the nucleus. It established, too, that this chipping liberated vast amounts of energy locked up in the nucleus. At the time, the methods used did not constitute a viable means of obtaining useful energy, since the amount of energy needed to break up the nucleus exceeded the amount given off. But they did indicate a possibility that has become fact with the fission of the uranium nucleus. These British discoveries were fundamental and none of the recent developments in the atomic field would have been possible without them.



The same curiosity
that inspired the
ancestors of their
industry leads
I.C.I.'s scientists
and technologists
towards the discovery
and development
of new materials
and improved processes.



Design

EDITOR Michael Farr

EDITORIAL ADVISERS Sir Gordon Russell

Alister Maynard

Paul Reilly

7. Noel White

ART EDITOR Konneth Garland

DEPUTY EDITOR John E. Blake

EDITORIAL ASSISTANTS Gillian E. Naylor

Malcoim Brookes

PRODUCTION Aubrey Hewitt

STAFF PHOTOGRAPHER Alfred Lammer

BUSINESS MANAGER Arthur Sudbery

Overseas

correspondents

AUSTRALIA Keith Newman
AUSTRIA Bettina Hirsch

BELGIUM Louis Desamory

BELGIOM ZOMIS DESGMO

CANADA John Kettle

DENMARK Ibi Trier Morch

FINLAND Olof Gummerus

FRANCE Roger Cario

GERMANY Heinrich König

HOLLAND Nico Verhoeven

Louis Emmerik

ITALY Latizia Ponti

JAPAN Hisaci Yamamoto

NEW ZEALAND Victor Beckett

NORWAY Ferdinand Aars

SOUTH AFRICA Charles Winchley

SWEDEN Eva Ralf

SWITZERLAND Alfred Altherr

USA Lazette Van Houten

27 The testers' role in designing Stirling Moss

29 Pointers

30 Lace and net Patience Gray

The diminishing demand for lace window curtaining is not, as many manufacturers seem to think, due to the vagaries of fashion. The fault, the author maintains, has been within the industry itself. In this article some important exceptions show how to exploit the design possibilities offered

by new materials and techniques

35 Street revitalised
The successful way in which the Civic Trust can co-operate with local authorities and building

owners is shown in this review of Magdalen Street in Norwich

38 Design analysis 15: saloon car

Tests by a total of 11 users were made on a new car which incorporates a number of unusual and extremely interesting features. DESIGN's assessment of the car, based on the reports by the testers, shows that some detail design falls short of the generally high standards achieved. The manu-

facturer comments on page 46

47 Advertising overhead

House style in an airline brings distinction to its machines

48 Improving bus design Dennis Gill

Tradition must be forgotten and fundamental ideas closely examined in the initial stages of bus

design if commuters of the future are not to turn to other forms of transport

52 Overseas review

JAPAN: industrial design renaissance Hisaci Yamamoto

Japan is rapidly overcoming many years of slow technical progress and is developing as a strong competitor in world markets

USA: communications in conference Abram Games

The author reports on the recent International Design Conference at Aspen, Colorado

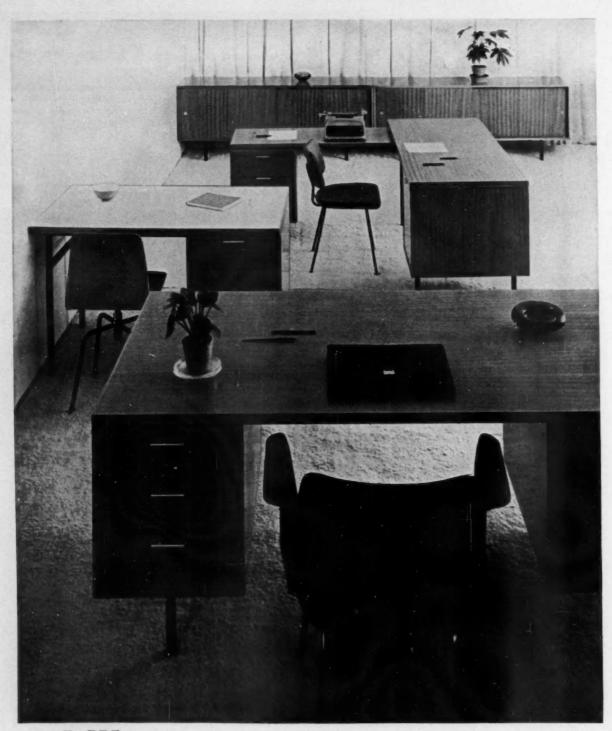
59 Miscellany

63 News 67 Letters 67 Books

The addresses of British manufacturers in this issue are on page 71

Editorial Circulation Advertisements The Council of Industrial Design, The Design Centre, 28 Haymarket, London sw1 Tel: TRAfalgar 8000 AND The Council of Industrial Design Scottish Committee, Scottish Design Centre, 46 West George Street, Glasgow c2 Tel: Glasgow pouglas 3914

Design may be obtained from booksellers at home and abroad. Yearly subscription rate: UK 40s post free



HILL CONTRACT DIVISION

HANDSOME IS, HANDSOME DOES—with his new Status Group, Robin Day introduces a truly protean modernity. At remarkably low prices, considering the materials and workmanship employed. Several basic broad desk tops, pedestals, panels, tables and storage cabinets; practically infinite permutations, to match any space and function—for example L-shaped arrangements, for compact convenience. Mahogany, pacific walnut, teak or rosewood veneers, working tops timbered or grey melamine, hardwood lipped. Square-section steel frames and legs, matt black or satin chrome. Many harmonious Hille chairs. Visit our showrooms, 39/40 Albemarle Street, London, W.1, Hyde Park 9576, or 24 Albert Street, Birmingham 4, Midland 7378, or write for brochure.

Internationally-honoured furniture for homes and offices

COMMENT
by
STIRLING MOSS

The testers' role in designing

This issue of DESIGN devotes nine pages to the review of a new car – the Triumph Herald – which I believe may be the first of a new generation of products from the British motor industry. While our assessment shows the Herald to be more successful than most in such matters as the layout of seating and controls, it raises a general question which I have long felt needs looking into, not only by motor manufacturers but also by firms making domestic equipment such as cookers, vacuum cleaners and so on. This concerns methods of feeding information from testers to somebody who is important enough to change the design if necessary.

When I see some of the faults that exist in new cars I often wonder where the work of the testers finishes. On one new car that was exhibited at a recent motor show you could not change gear without hitting your knuckles on the dashboard. Somebody must have seen that before the car went into production and yet it was allowed to happen. On some cars you cannot open the quarter light without it touching the steering wheel and on others you bang your legs on the door handle or window winder. There are many things of this nature that are small details but which should never be allowed to reach production stage.

The members of CoID staff and others with whom I co-operated in testing the *Herald* agreed that the layout of controls on the dashboard could be improved, and an alternative suggestion is put forward in the article. That is the type of thing I think the tester should do. The impression one gets, however, is that he takes a car out and if the door handle drops off he says: "Look, it dropped off. Put another one on, George, I'm going another 500 miles tomorrow". That is very wrong.

The matter should be treated in much the same way as a test pilot feeds back information on a new aircraft. In a racing car, too, the rightness of all the detail design is commonplace. It is no good having an instrument you cannot read because the spoke of the steering wheel is in the way, and it is no good having a light on the dashboard that is so bright you cannot see the road properly. These are obvious points which in racing are carefully studied so that everything is absolutely right. I do not see any reason why they should not be right on a car produced for normal road use.

Testers should be very much a part of the design team – the designer should design but the tester should check that everything is there and in the right place. The testers should be properly graded from small to large people and no doubt racing and rally drivers could also make a useful contribution if they were invited to do so. The really important thing is that the testers should be intelligent, enthusiastic and experienced, and should be able to report to somebody sufficiently high up in the firm for the appropriate action to be taken.

You parlez

anglais?



Good. Back from Paris, just. Weeks of negotiations, patient, complex, cordial, triumphant. Le shake-hand. Le pat-back. Soit! A la vôtre . . .

All complete now. All sworn, sealed, stamped, signed, settled. All legal. The Party of the First Part (nous voilà partis) etc., the Party of the Second Part (la soirée au deuxieme) etc... the Party of the Third Part (la quidame qui danse a ladite soirée) etc... Whereas (considérant que)... Notwithstanding (assis)... As witness (que le ciel nous soit témoin) etc... All official.

Meaning? That Wilmot Breeden, offering their technical knowledge (savoir-how), have bought a major holding (force majeure) in famous French components company Autocoussin Dura S.A.!

Meaning that Britain (l'intrépide Albion) now has a foothold (assiette de pied) in the motor vehicle components side of the European Common Market (marché vulgaire, mais fort commode).

Vive la reine! Vive le commerce et la science des mécanismes! Vive la France! Vive la joie! Et long vive Wilmot Breeden whose locks, handles, window-winders, bumpers, over-riders, etc., virtually every British car roads today, etc., now whizzing about all over Europe etc.

WILMOT BREEDEN are at Birmingham: also at London, Manchester, Bridgwater, Glasgow, Melbourne, Toronto.

Pointers

Moswegian journey

If you know the magnificent railway journey from Glasgow to Oban you'll be glad to know that the Scottish Region of British Railways has laid on two observation cars – until you look at the picture on this page. The two-toned, black-buttoned upholstery is designed so that passengers can get a good view of each other or of the Moscow-style rising-sun décor inside the carriage. Passengers who want to see the scenery can still do so by paying a few shillings less and travelling in an ordinary carriage, or if they care to wait a few months they will probably be able to ride in a really



well-designed double-decker observation car which has recently been considered by the Design Panel of British Transport Commission. Apparently the Scottish Region produced the present observation cars while the design team was looking the other way. It is a hangover from the bad old days and I'm told it is unlikely that many more such designs will roll into stock.

Light-hearted affair

Volunteers for space travel will be interested to hear that human-factors scientists in America have hit on an original idea for "minimising" – as they put it – "problems of isolation". They suggest that men should be accompanied to outer space by women. This, they believe, would lead to greater efficiency and they even suggest – I quote from a US Navy bulletin – that "weightlessness might offer fascinating experiences".

Fashion goes in cycles

If you can't afford a carriage you can still have a stylish marriage, for she'll look sweet upon the seat of a bicycle designed by Bertolini. This Italian designer is working for a British firm on what its publicity agent calls the world's first range of fashion bicycles. Although the chairman of the manufacturing company has promised

a series of fashion shows for men's machines as well as women's, it is said that styling and colour will be entirely feminine in appeal. It won't be long before we shall be watching pony-tailed jean-agers pulling up beside the soft Mediterranean squish of the nearest Espresso machine and leaping clumsily from their effeminate men's bicycles. It could be fun – unless, of course, you insist that fun and function don't go together.

How low-boy can you get?

A design team in America has just fallen over backwards to put fun into function, and you'll probably be seeing the result before long in the glossy magazines – a set of bow-legged furniture made to the designs of the George Nelson team. Here is an unashamed attempt by designers to find a way of doing something difficult because the results would look pretty. They have hit on an ingenious way of joining chromium bowed legs to each other, and the result is very graceful indeed.

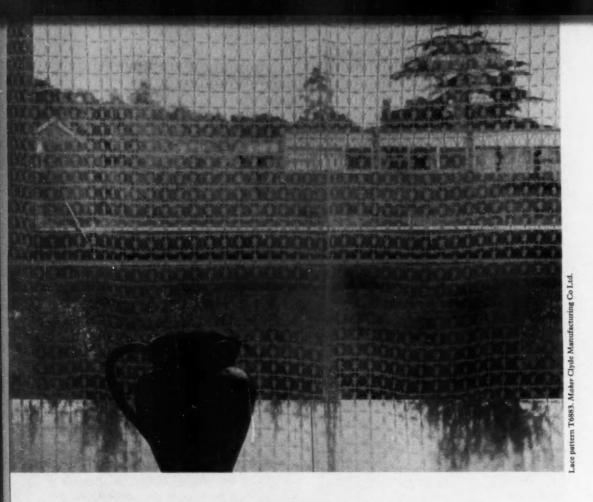
Design your own client

The head of this team, George Nelson, who defends the American habit of designing products that will soon be out-of-date, was generously quoted by Richard Hamilton in a recent talk at the Institute of Contemporary Arts about The Design Image of the Fifties. Mr Hamilton presented an alarming thesis. After a hair-raising account of design-doings in America today (one car manufacturer has a panel of experts which evaluates the sounds and smells of new models) he spoke of the new role of the designer. Because the planning of products is now five years ahead of production, there is plenty of time, in his opinion, to design the consumer to fit the product. The designer, he says, can "maintain a respect for the job and himself while satisfying a mass audience; his responsibility to that amorphous body is more important than his estimation of the intrinsic value of the product itself".

Axes ground, chips shouldered, etc.

A week before this terrifying evening the ICA organised a display of Designs of the Year 1959 and a discussion about them. Speakers included Mary Adams, of the Consumers' Association, who did a good sales talk for Which? and James Stirling, the newly-brutal architect, who took the original line that he was too tired to stand up, that he wasn't interested in industrial design and that all these things were just styling anyway. Bruce Archer's lively criticism of the award-winning designs included a suggestion that the title Designs of the Year was a misleading way of describing a selection of products shown in the Centre in a particular year. And Sir Gordon Russell, who reminded the audience of the purpose of the annual awards, said that a decision had already been made to re-name them The Design Centre Awards. That - apart from an audience contribution which had all the sparkle of warm lager - was that. No one referred to the designs as status symbols or described the designers as psychological persuaders. A good old-fashioned evening was had by all.

KENNETH J. ROBINSON



LACE AND NET

To sort out the threads of the lace curtain industry would need a mind as complex as the lace machine itself. This article sets out to unravel a few of them because the industry is in a bad way, and it is worth enquiring whether it is capable of resurrection.

The essence of cotton lace fabrics, fine, coarse or heavy, has always been their transparent intricacy. Today they have lost their popularity as window curtaining in this country. The demand has been dying for a long time. Post-war acceptance of modern décor inspired by a new architecture is at the root of it. The considerable export of lace to Australia and the Commonwealth countries in the last 10 years – recently curtailed by import restrictions – has dulled the manufacturer's awareness of this phenomenon. In the last few years the tremendous impact of Terylene and the promotion of plain Terylene nets for windows by ICI has knocked the bolt home. Lace men tend to blame Terylene and Terylene advertising for the present recession.

The most go-ahead firms are experimenting at considerable cost and technical difficulty with Terylene on the lace machine. They are beginning to install cheaper warp-knitting machines which produce fine Terylene nets at tremendous speed. They are toying with the idea of joint advertising. Remedial action in fact. But

not enough manufacturers are asking themselves if the decline has anything to do with current poverty of design and post-war changes in public taste.

Twisting, knitting and weaving

Net curtaining includes three main types of fabric based on different methods of manufacture. These are lace, made by the twisting process of the lace machine, varying in weight according to the gauge of the machine; net, plain and patterned, and perhaps flock printed, made by the knitting process on the warp-knitting machine (British and German makes) which are much cheaper and operate at far higher speed; and net and voile made by the weaving process, often called marquisette, which is capable of decoration by madras patterning (i.e., a pattern woven into the net and cut), and by flocking. The new woven glass fibre Vetrona, heavy linen woven nets and printed cotton and linen voiles must be borne in mind as competitors in the field.

The proportion of lace machines in the industry as



PATIENCE GRAY
the author of this feature, writes regularly
for The Observer.





ABOVE A damask lace curtain that was made 50 years ago. Although the pattern has dated, the manufacturer has used to the full all the intricacies the lace machine is capable of, and the whole design has a sense of scale that is lacking in modern fabrics. MAKER McInnes Textiles Ltd.

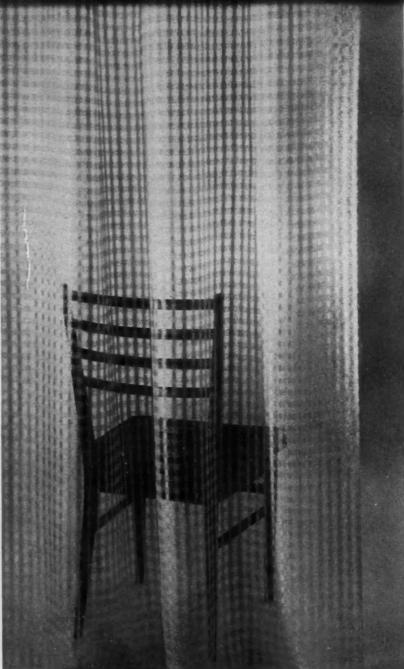
LEST Sylph, a Terylene and cotton net, which is outstanding among today's designs for its beautiful large scale pattern. It has the same breath of scale as the Victorian design, but its simplicity is entirely modern. DESIGNER Olive Sullivan. MAKER Edinburgh Weavers.

£1 16s per yd (48 inches wide).

RIGHT Vetrona opalescent net (G736), one of the new woven glass fibre fabrics which are now available in a variety of textures and colours. Although it is expensive, its relative opacity and its many practical advantages (it dries rapidly, needs no ironing, will not burn or fade, etc.), make it a new rival to traditional net. MAKER Vetrona Fabrics Ltd. £1 5x 6d per yd (46 inches wide). Chair: MAKER D. Meredew Ltd. From £6 13x.

nelow One pattern from a range of interesting nets produced by a firm which, with its inventive use of cotton reinforced with Terylene, has made a positive contribution to lace design in recent years. DESIGNER F. G. Hobden. MAKER Clyde Manufacturing Co Ltd. 7s 6d (width 40 inches); 10s 11d (width 60 inches).





compared to weaving and knitting machines is high, but they are all competing for the same market. Of the 32 firms invited to attend a recent lace conference 17 depended on lace machines only, nine used madras looms (seven in conjunction with lace machines), and six were using knitting machines.

The two centres of the lace trade are in the Irvine Valley in the Ayrshire hills and in Nottingham. The bulk of lace production is centred in the Scottish valley where handloom weaving was started by the Protestant refugees from France and Flanders in the sixteenth century, and flourished until the introduction of the lace machine in 1875 by Alexander Morton in

Darvel. Today about 301 machines are spread among the 30 member firms of the Scottish association, employing some 2,000 operators.

You can see these little factories set cheek by jowl in the small towns of Darvel, Newmilns and Galston, along the narrow valley. They produce in a good year 42,000 miles of lace. This represents more than three quarters of total British output. Nottingham accounts for a relatively small proportion, but most of the important finishing is done there, hence the intimate connection between the two centres.

Visiting the Scottish firms gives one a new insight into the meaning of individualism in manufacture. They

Some lace patterns shown to scale

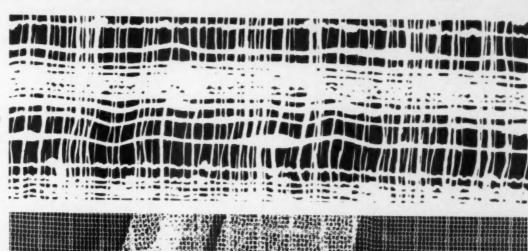
Dunure, a heavy gauze woven in cotton and linen; the use of various linen, bouclé and slub yarns produces an effective random texture. MAKER Donald Bros Ltd. 13s 6d per yd (50 inches wide).

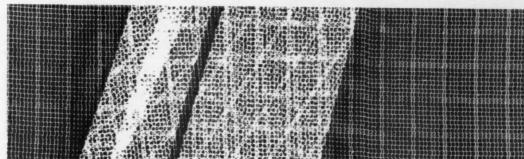
A 100 per cent Terylene net (K109) made on a warp knitting machine; because of its fineness and its strength, Terylene is ideal for the warp knitting process. MAKER James McInnes & Co. Ltd. 5s 7d per yd (36 inches wide); 7s 4d per yd (48 inches wide).

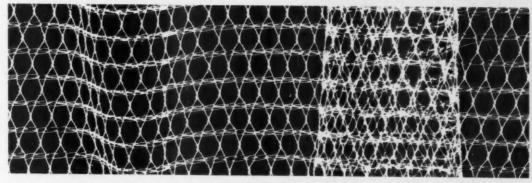
A 100 per cent Terylene lace (No 29); the thread is specially processed to give it bulk and opacity. DESIGNER W. B. Brown. MAKER Henderson, Morton, Inglis & Co Ltd. 6s 6d per yd (38 inches wide).

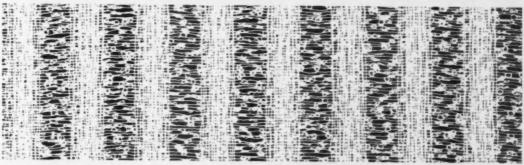
A woven fabric (G736) using a bouclé yarn in glass fibre – the newest material to be used for window nets. MAKER Vetroma Fabrics Ltd. £15s 6d per yd (46 inches wide).

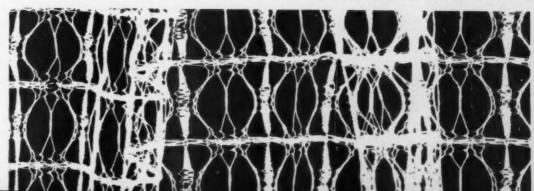
A lace pattern (T6883, see also page 30) produced by using a small percentage of Terylene to secure the distorted cotton threads. Here Terylene has been used to produce an effect which could not otherwise have been achieved. DESIGNER F. G. Hobden. MAKER Clyde Manufacturing Co Ltd. 5s 11d per yd (40 inches wide); 8s 11d per yd (60 inches wide); 8s 11d per yd (60 inches wide).











are all small concerns averaging not more than 10 lace machines apiece. Each machine costs a fortune—anything up to £14,000. The 'rugged individualists' live in a tight community of cut-throat competition. The traditional method of trading inherited from the handweaving era makes co-operation difficult. There is scarcely any contact between the manufacturer and the retailer, let alone with the public. Most of the lace is sold to wholesalers, whose sole pre-occupation is selling lines in bulk and selling them cheap. (Cheap means 2s 11d and 3s 11d per yd retail.)

Room at the top

From the outsider's point of view, with some notable exceptions, it is clear that the lace industry is behind the times. And one feels no atom of surprise that straightforward Terylene nets manufactured on warp-knitting machines have stolen the market. The industry is preoccupied with the cheap end of the textile trade cotton lace has always been cheap. It is cut off from social trends and fails to realise that fashion in window curtaining as in every other branch of furnishing filters down from the top. Manufacturers, we know, are obsessed today with reaching the mass public, but other industries - for instance carpets and furniture trades have learned the wisdom of running a top line of well designed goods, even if the popular mass-selling article pays for it. Manufacture at two definite levels of taste is a characteristic of our time. Apart from Edinburgh Weavers (a subsidiary of a much larger textile manufactury), the Clyde Manufacturing Company in Nottingham and Donald Brothers of Dundee, which specialises in woven linen and rayon nets, there is no sign that this dual system works in lace and net.

On the whole, design effort and ingenuity go into the production of half-window curtains called brise-bise on the knitting machines, with complicated lace inserts sometimes combined with flocking, or in producing such items as flat curtain nets which are a trompe l'oeil effort at frilling. Where real lace is concerned the showrooms are stacked with coffee-coloured and tussore lace. This is a real insight into Australian taste but entirely outside the modern conception of interior decoration. Some firms have begun to appreciate the present demand for white nets. They have resuscitated traditional lace background patterns using non-shrink cotton strengthened with Terylene, or all Terylene (which is more expensive). But at the moment these 'fine' laces lack substance and tend to cling.

Poetry or paltry pattern?

As far as madras is concerned Edinburgh Weavers has blazed the trail with a very expensive but outstandingly beautiful net called *Sylph* (page 31), designed by Olive Sullivan. This has a diaphanous, poetic quality, perhaps the one example of High Fashion in decorative net to be seen. Attempts to bring this fresh approach down to a more inexpensive level, by reducing the patterned areas and hence reducing the 'cutting' operation, at once produce a mechanical note. Flocking is also applied to knitted nets and woven marquisettes in a mechanical

way. Mean little dabs of coloured rose-buds or regimented border patterns are current good selling lines, it seems. Coloured patterning is one of the present unhappy trends, quite contrary to the filmy, light filtering effect which modern windows need.

What really gets the lace manufacturers' goat is the public's lack of appreciation for their speciality intricacy. Their machines can perform miracles of complexity. They are galled by current demand for curtaining which "seems to have no design in it". But what they fail to study is scale. The finest thing I saw in the valley was a damask patterned lace curtain made 50 years ago (see page 31). The real lesson to be learned from this net was the way it exploited the intricacies the machine is capable of, and its large scale pattern. The manufacturer, S. W. McInnes of McInnes Textiles Ltd, said he could make it (retailing at about 50s a pair) if he was persuaded that a demand exists. But the impetus will never come from his wholesale buyer, and he has no contact with the stores. Somebody needs to tell the trade what the public wants. Another design I saw at Morton, Young & Borlands was a palm leaf patterned madras designed 20 years ago which was conceived on a scale appropriate to modern needs. The next step, I am convinced, is to explore the possibilities of large scale pattern to set against the much wider areas of window found today.

Meanwhile the Clyde Manufacturing Company has made the best contribution to lace curtaining in the last year or two. The firm is adapting the old lace ground patterns, cotton reinforced with Terylene, fairly coarse, finished with a whiter than white drip dry finish. These nets are stable, they have body. In spite of the lament that they have no 'design' in them Scottish firms are beginning to be influenced.

Will the industry be prepared to accept outside advice, and from whom? Is it capable of getting together and commissioning outside designers, such as Jacqueline Groag and Olive Sullivan, who have both a fine understanding of textile design and a firm grasp of trends in interior decoration? Can it overcome the blockage in the selling system? Can these remarkable machines be used to produce lace nets suitable for room dividers, bedspreads mounted on solid colour, bed drapes in the modern taste at the top level?

The combination of cotton reinforced with Tervlene has produced the possibility of translucent, stable, drip dry materials with the minimum of shrinkage which, properly finished and washed reasonably often, could provide a charming element in modern rooms. But it needs a sophisticated and talented brain to work out the applications of these various materials to a modern setting and patterns appropriate to their different uses. Perhaps this is asking too much of selfstyled individualists to whom the whole question of modern design and modern architecture seems remote. Did I not see the Paisley Road leading out of Glasgow fenced in with Victorian Holland blinds, lace-edged, acorn knobbed, and dim looking brise-bise? Will a lot more lace machines have to stand idle before the manufacturers take a more progressive view?

Street revitalised

The Civic Trust has co-operated with Norwich architects and building owners



PETER WHITWORTH

When Duncan Sandys, Minister of Defence and President of the Civic Trust, formally opened the restored and redecorated Magdalen Street in Norwich, it was more than just an exhibition, it was tangible evidence of an awakening of public conscience against the mediocrity and muddle that has for so long been accepted as inevitable in our streets. Its success forcibly demonstrates that civic design amounts to more than bunting and flowered clocks or regimented gardens. These positive results, achieved voluntarily by a group of citizens, cannot but emphasize the failure of local authorities' planning control, with its negative powers and aesthetic censorship, to cope with the problem.

Magdalen Street was selected for this bold experiment as being neither better nor worse than hundreds of others and, in common with many, it possessed an unrevealed potential. When negotiations with the Norwich authorities met with enthusiastic support and the project was considered practicable, the Civic Trust appointed Misha Black of Design Research Unit as consultant designer and co-ordinator, and together they

persuaded the owners and occupiers of some 80 properties to co-operate in the exercise.

Mr Black conceived an outline plan and, together with his colleagues in DRU, devised a manual of operations for the guidance of the group of Norwich architects (commissioned by the trust) and the company shop architects who were to execute the detailed work on site. This was in no way a working drawing for a street, but it gave general principles to be followed and drew attention to many of the causes of the existing lack of unity. Two main groups of standard colours were recommended, one for wall surfaces and the other for woodwork and fascias. Finishes to various materials were specified and the importance of awnings and curtaining of upper windows was stressed. Actual samples of selected materials were included. Basic instructions were given on signs and fascias with details of a wide range of recommended alphabets. These, with notes on procedure for outside architects, made up the concise document which could be considered as the designers' brief. Undoubtedly it was this

remarkable folio, which retained great scope for individual expression and house styles, that laid the foundation to the success of the completed scheme.

With these recommendations in mind, every single property, fascia, sign or object was surveyed and carefully examined. After consultations with all concerned the final scheme was prepared which resulted in 65 properties being redecorated, 38 fascias re-lettered (17 of these altered in size), 26 shops installed new blinds and 16 new curtaining, 22 projecting signs were removed and 40 other odd objects were redecorated or replaced.

The removal of lighting columns, which were replaced by bracket lamps mounted on buildings, presents a worthwhile reduction in clutter by day, but by night there is added benefit from the impression of width created in the street. Certain areas where the new lighting would have been inadequate were reinforced with reflected light from two buildings that were flood-lit, or by bulkhead lights on the soffit of the new bus shelters designed by the Norwich City architect's department. The litter bins are a realistic contribution to the problem generally, being virtually the minimum container, but distinguished by excellent lettering.

A certain measure of success in obtaining concessions from the Ministry of Transport has enabled the 'No Waiting' signs to be relettered and some improvement effected on the poles. While this achievement is undoubtedly worthwhile the results justify still further concessions in this direction in future schemes.

That this project should have started at all is remarkable, but that it should have been so outstandingly successful reflects credit on all connected with the work. The new street is not perfect, but it remains a better street than it could ever have been before, both as a contribution to civic design and as a trading street. Its future is assured as its street traders' association has reformed and appointed the group of Norwich architects to advise on future maintenance and rebuilding.

The success of this experiment will certainly focus attention on our neglected old streets and also, perhaps, on our mis-used new ones. It is difficult to think of any town where the streets have not been ruined by some shopfitters and ill-advised landlords, resulting in poorly designed fascias and signs.

Perhaps the most outstanding lesson to be learnt is that benefit of this magnitude can be gained for relatively little expenditure on the properties, in this case about £5,000; the participants each spent between £5 and £500. Some risk lies in this operation being so commercially attractive; slavish imitations of Norwich cannot succeed without expert guidance coupled with detailed study of the problem. It is heartening to learn that Stoke-on-Trent, together with the Civic Trust and Misha Black as co-ordinator, is planning a larger project in Burslem due to be completed next year.

Over 50 other localities are now considering similar projects and have sought advice from the Civic Trust. These range from industrial areas like Stoke-on-Trent to suburban Croydon and include Windsor High Street and the Royal Mile in Edinburgh.



Maudlin above



These composite illustrations showing a small section of Magdalen Street, before and after the experiment, were made from a series of individual photographs; the upper one formed part of the original photographic survey of the street. About £500 was spent on the five premises shown; of this sum, approximately £290 was spent on repairs and alterations and the remainder on decorations. The Wilson and Nash building contains nearly all the ingredients of the Norwich experiment. Surplus display material was first removed together with unwanted ironwork



Magdalen Street below



and fixtures, the fascia was relettered, the hanging sign repainted, and new curtaining was provided to the upper windows. The major change in the redecoration is the reversal of tone values around the windows and on the fascia. The tobacco shop's redecoration again uses the reversal of tone values. The accumulation of the signs below the fascia and the window dressing suggest that the lesson of the street has not been fully understood by the occupier. A new design of street lantern and bracket replaces the old.

The Jack of Newbury is probably the most rewarding of the

redecoration schemes. The repainted sign is particularly attractive. Although the effect of new paint and curtains, with the tidying up of small signs has brought about a slightly fanciful solution, the robust character of the pub remains intact. Howard's fish shop is one of the boldest schemes in the street and the result is certainly one of the most charming. The lettering above the fascia contributes towards its character. Apart from a new sunblind and redecoration, the rather curious railing was removed.

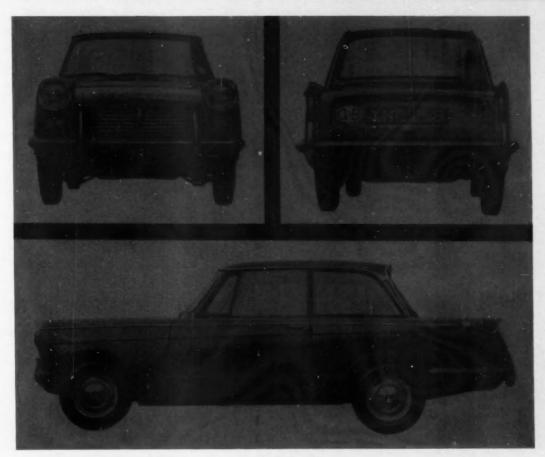
Barbara, while comparatively minor, is effective within its limitations. A sense of neighbourliness has been achieved by relating the new fascis to the fish shop and the addition of the window box adds a touch of colour that contrasts well against existing brickwork.

To date, these improvements have been confined to the façade and too often disappointment is felt on entering the premises, as both stock and interiors could be vastly improved. Perhaps pride in the street and someone's example may again start the snowball.

DESIGN ANALYSIS 15 SALOON CAR

MAKER Standard-Triumph Group. BODY CONSULTANT Giovanni Michelotti. £702 7s 6d including purchase tax





The products which have formed the subjects for analysis in this series have been chosen because they represent significant developments in their own respective industries and on this score deserve special comment. A car is perhaps the most complex example of consumer product design. To discuss all aspects would be beyond the scope of the present study and this article is therefore concerned primarily with those elements which come broadly within the province of industrial design.

The opinions expressed in the article are based on comments from a total of 11 users, all of whom drove the car during a period of 18 days for a combined distance of about 1,700 miles. The team included Stirling Moss, who was able to provide the expert comment of one of the world's leading drivers; Brian Shackel, an engineering psychologist who is concerned with human factors in design; a group of CoID staff who are all car owners and combine a professional concern for design with an above-average interest in motoring; a free-lance industrial designer who was at one time chief stylist in one of the large British motor manufacturing groups; and two women drivers.

Objectives The Standard-Triumph Group, maker of the *Herald*, set out with four main objectives in the design of the new car: first to improve driver control and so increase safety and ease of parking; second to reduce the cost of repairs and servicing; third to keep operating costs to a minimum; and fourth to provide exceptional comfort and good appearance.

To achieve these objectives the firm has introduced a number of technical innovations. The most significant of these are the use of independent suspension of all four wheels; an unusually small turning circle (25 ft); the use of rubber and nylon bearings, or metal bearings with sealed-in lubricants, to eliminate the need for greasing points and thus allow longer than normal periods between servicing; the use of a separate chassis with non-structural body panels bolted together allowing easy removal for body repairs; provision for adjustment of the driving seat in height as well as in reach; and the provision of an adjustable steering column designed also to collapse in a crash. In recognition of the need for good appearance, Giovanni Michelotti was commissioned to design the body. Until recently, most of these features were unique in British cars of this size and price, and though the new BMC small cars have



The four illustrations on the previous pages and the three-quarter rear view shown here illustrate the clean lines and good proportions of the *Herald* which on the model tested were marred in places by poor detailing and finish.

DESIGN ANALYSIS

subsequently made their appearance with some similar features, the *Herald* must take the credit of having been first in the field. Saloon and hard top coupé versions are at present in production but only the saloon version was tested and this was a pre-production model.

Appearance Within broad limits post-war car body design has developed along well established lines which have been described often enough in DESIGN. A number of fairly elementary principles have been evolved which combine to produce the clean forms and low stable lines that are admired by everyone. It is surprising, therefore, that with one or two notable exceptions the British motor industry until recently has largely ignored these principles and in some cases has become aware of them only through the intervention of designers from abroad. The much publicised Italian style, as applied to British cars, is by no means revolutionary, and is not particularly Italian in conception. Rather, it has introduced an internationally accepted form where previously it had been ignored or misunderstood.

The Herald is a good illustration of this process within the Standard-Triumph Group. The overall shape and proportions are good and have been carried out in the currently fashionable crisp-edged style: the widely spaced head and tail lamps emphasise width and stability; the clean front to rear line and low proportions express speed; the high bumper position emphasises the lowness and breadth of the car from the front and rear views; the shallow domed panels and tight radiused curves allow reflections of light to be precise and delineate the form – these are all features which distinguish the Herald's appearance from that of previous models by the same firm.

Closer examination, however, suggested that this fundamentally sound shape is less successful in its detailed execution. The flattened cross-section of the wings, for example, and their lack of taper, were felt to be lacking in the type of refinement that is characteristic of the shape as a whole. This also affects the shape of the headlamp bezels which, with their flattened tops, look a little squat.

Junctions between different body sections are lacking in subtlety – notably the rear window pillars where guttering, edging and gasketing gather together like converging rail tracks only to stop short of the main body without flowing naturally into it; and the junction of the boot lid and tail fins misses the type of smooth transition from one plane to the next that seems natural in metal pressing. This lack of attention to detailing tends to disrupt the sense of unity and gives the complete car an appearance of fragility. To give rigidity to the shallow domed panels a rather large number of stiffening creases is used and while on the roof these produce an extremely elegant and graceful line, the lower creases along the sides of the body tend to break up the surface and it was felt that these could have been more skilfully handled. Finish also on the body-work of the model tested was considered to be poor - rubber mouldings were ragged and in places loose, and metal trim sometimes looked unfinished.

The use of a separate chassis has one big virtue from the manufacturer's point of view – apart from its obvious advantages in reducing the cost of repair work it lends itself to the introduction of a variety of different bodies. No doubt an estate car and drophead version of the coupé will be introduced in due course.

Getting in and out For a car which is so small and low, getting in and out was found to be surprisingly easy. The chief criticisms were of the door locks which jammed repeatedly on this model during the period of testing. (It is understood that this has been rectified on production models.) Few of the users liked the way the key had to be turned one way from its upright position to lock the door, and the other way to unlock it, and even after two weeks, users had consciously to remember what to do. The placing of the interior door pulls requires little reaching from the driver's or passenger's seats, though they are less useful as steadying handles when the car is in motion.

Access to the back seats was thought to be satisfactory and the use of balance springs to hold the front seats in the tilted position was effective.

Seating The wide range of adjustment of the driver's seat is one of the most important contributions made by the *Herald* to driving comfort and safety. The nine positions fore and aft at \(\frac{1}{2}\)-inch intervals meet the full recommendations of McFarland.* Vertical adjustment,

^{*} R. A. McFarland and R. G. Downey, Biotechnical Aspects of Driver Safety and Comfort, Society of Automotive Engineers Transactions, 1958, Vol 66, pages 630 – 648.

R. A. McFarland, A. Damon and H. W. Stoudt Jr., Anthropometry in the Design of the Driver's Workspace, American Journal of Physical Anthropometry, 1958, Vol 16, pages 1–24.
R. A. McFarland, Human Limitations and Vehicle Design, Ergonomics, 1957, Vol 1, pages 5 – 20.

These pictures show two stages in the development of the prototype which was built in the Vignale workshop in Turin and then delivered to Coventry. The body was developed around the new Triumph chassis in close consultation with Standard's engineers. The finished prototype PAR RIGHT shows that, apart from paint trim, the production model makes few departures from Giovanni Michelotti's design.







The unfinished looking junction between the rear window pillar and the body, and the 'Herald' badge at the top of this pillar with its inappropriate Gothic lettering, are examples of poor detail design that detract from the successful shape of the car as a whole.

The view of the tilted seat TOP shows the rubber blocks giving four height adjustments at the back. Two nuts must be removed to alter the height at the front. The two illustrations ABOVE give some indication of the comfortable driving positions and range of seating adjustment.



The instrument dial is basically good but clarity would be improved if mph numbers and markings could be strengthened, perhaps by a deeper colour, to make them stand out from other details which are at present too dominant. Illumination of the dial at night was thought to be too bright.

however, is only 1 inch, whereas 4 inches is recommended by McFarland. But this ability to alter the height of the seat independently of fore-aft adjustments is a step forward in cars of this class. The two-position adjustment at the front, and the four positions at the back provided by a simple rubber wedge, combine with other adjustments to give a total of 72 different seat positions. (Why does the manufacturer claim only 48?)

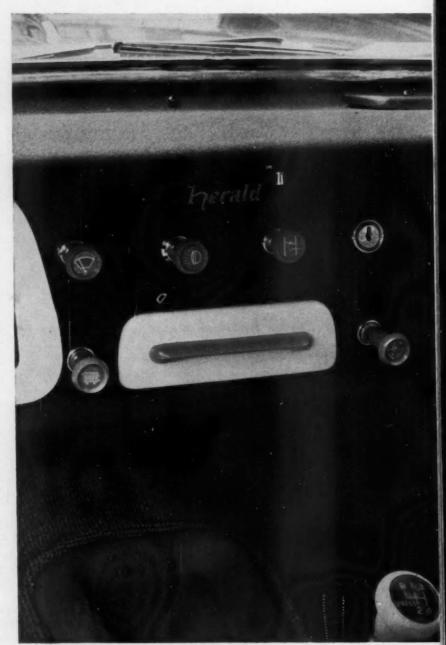
The front seating generally was found to be comfortable though one driver (6 ft and 13 stone) found on a long journey that the base of his spine was contacting a metal bar in the framing of the seat squab. Rear seating was cramped and suggests that the *Herald* should be regarded as only an occasional four-seater.

Hand controls Initial difficulty was experienced in the interpretation of symbols on the fascia controls. But this was not felt to be a serious handicap since car owners quickly become familiar with the controls on their car. It was rather the treatment of the symbols that users criticised since it was felt that they were unnecessarily complicated and coarse in execution.

The layout of the fascia is more important. Although all controls were well within reach of the drivers, the actual arrangement of knobs was thought to be haphazard. Thus knobs with related purposes were separated from each other instead of being grouped together. An alternative layout is suggested by Mr Shackel (see opposite) which provides a more satisfactory grouping and emphasises safety by placing the two controls which may need to be operated quickly without looking—lights and wipers—nearer to the driver and in easily found positions. Some of the knobs, it was felt, were not sufficiently positive in operation, and with those that could be set in one of several positions there was no reassuring 'click' into position.

The placing of the trafficator control on the steering column was liked by all users even though a rather more positive click position would have been an advantage. The provision of self-cancelling, unusual on a car of this price, was particularly welcomed.

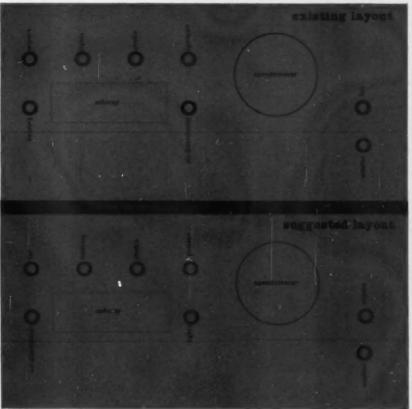
Speedometer All instruments are contained within the single speedometer dial. This is good and well positioned, but the black and white contrast of the



RIGHT The map tray beneath the glove box and the shallow tray for cigarettes, sweets, etc, in front of the gear lever, were particularly liked by the testers, as was the trafficator lever with its self-cancelling device.







The existing layout of the fascia controls TOP and the suggested new layout by Brian Shackel ABOVE. In this suggested layout it will be seen that controls with similar functions are grouped together, and the two controls which may need to be operated quickly without looking (lights and wipers) are nearer the driver in easily found positions.

LEFT Symbols on the fascia controls are not entirely successful. Some are confusing, eg the air distribution knob has arrows suggesting the knob should be turned while in fact it should be pulled. The fascia itself is made of black crackel finished Prestfibre.



This view from the driver's seat shows the foot pedals to be placed to the right of the driving seat axis, the steering wheel being angled slightly to the left. Although there are good reasons in this case such displacements should be kept to a minimum.



In addition to his comments which are incorporated in the main article, Stirling Moss recorded the following personal assessment of the *Herald*:

"I think the Herald represents a great advance in British cars. I found it so good that it needs more power to do justice to its road-holding qualities. Although we are well behind European competition in the use of independent rear suspension I think Standards have been particularly successful in producing a car without over-steer which is usually one of the problems with a swing axle system. There are many good ideas, such as the way the body is constructed, easy access to the engine and so on. The extent to which driver comfort has been studied is unusual in cheap mass production cars and I like the way the hand falls naturally from the steering wheel to the gear lever and hand brake. One thing that is very important is the reserve petrol tank and while it provides only about 15 extra miles it is enough to get you to the next garage. But I think it is a pity that there is no starting handle and no hole for one".

Where ergonomics could help design

milometer numerals is stronger than that of the more important speedometer numerals, so that the milometer is unduly prominent. The inner kph scale complicates the dial; this incidental aid to Continental motoring should have still less thickness and contrast of lettering.

The illumination of the speedometer at night was too bright and the trafficator warning light was so bright as to be a potentially dangerous distraction. From the driver's seat the trafficator light was found to have a brightness of 600 foot-lamberts compared with 0.13 foot-lambert for the main headlight beam on a tarmac road and 0.25 – 1.0 foot-lambert for the speedometer illumination. Some device allowing the driver to control the brightness, particularly of the trafficator light, is essential.

Foot controls During their early handling of the car several users expressed concern at the fact that the foot pedals are placed definitely to the right of the expected position, straight ahead of the driver. Until drivers had become used to this unusual position, there was a tendency to move the right foot too far over to the left when intending to brake and to press the clutch instead of the brake pedal. However, all users quickly became adapted to this situation and all agreed that in the long run it caused them no difficulty. The reason for setting the pedals off-centre in this way was clearly to allow sufficient room to rest the left foot between the clutch pedal and the gear box cover – a necessity for comfortable driving. In principle, however, only the minimum displacement of this nature should be allowed.

The close spacing of the three pedals caused those with large feet and heavy shoes to touch feet on occasions. Also, both brake and clutch pedals have a full travel of 5 inches, which is excessive even allowing adequate tolerance for wear and adjustment. Moreover the accelerator pedal is $2-2\frac{1}{2}$ inches below the level of the brake pedal when both are at rest. This caused some of the men users to catch their shoe welts on the underside of the brake pedal, with consequent delay in braking. As a general rule the accelerator pedal should not be below the level of the brake and ideally should be fractionally higher.

The mechanically sloppy action of the accelerator

was generally disliked and made it difficult to crawl in slow traffic without jerking.

On the road All round visibility from the driver's seat is excellent. Deep, wide windows and slim pillars leave the field of vision almost entirely unrestricted. The four corners of the car are so well defined that it is possible to manoeuvre the car to within half an inch of an obstacle and still be sure of clearing it. This, in conjunction with the remarkably small turning circle, must surely make the Herald the simplest to park of any car of similar dimensions. All users agreed that the car is one of the easiest to drive of any they had previously tried. The positioning of the hand brake, gear lever and steering wheel could hardly be bettered. Steering is light and extremely positive at all speeds and the suspension provides a smooth ride at the back and front over a wide variety of road surfaces. With four up, however, there was a tendency for the back to come down rather hard on the stops when the car was being driven fast over an undulating surface. Cornering can be fast and flat, with no tendency for the car to roll, and this induces a feeling of great confidence. Speed and acceleration on the model tested were thought to be disappointing and 65 - 68 mph could be achieved only with difficulty on a long clear road. Mr Moss, while enthusiastic for the car's handling qualities, thought it to be definitely underpowered. He inadvertently confirmed a feeling among other users that it was too easy to slip into reverse gear instead of first by making this mistake himself while intending to move forward in a stream of traffic.

Driving in rain produced criticisms of the windscreen wipers. The aerodynamics of the car at the front where the wings meet the bonnet are such that rain is caught up and swept backwards over the windscreen in sufficient quantities to make the wipers ineffective at speeds of more than about 30 mph. It was felt that the rubber used for the wipers was too soft and consequently spread the water across the glass instead of squeezing it off.

Front seat passengers had a tendency to steady themselves by clutching the door handle instead of the door pull, which might produce a dangerous situation, but on the driver's side the legs were well clear of contact



The projecting hoods on the head lamp bezels could cause unnecessary injury if a pedestrian were hit by them, and such hoods are not recommended by the Road Research Laboratory (DESIGN August pages 22 – 27). Brian Shackel and Stirling Moss are shown here discussing details of the front end.



The spare wheel, housed in a well in the ample boot, is covered with a hardboard disc. The petrol tank on the left has a reserve section which is turned on from inside the boot. The boot lid stay became detached during the period of testing.

with the door handle and other projections, and the quarter light, when fully open, was well clear of the steering wheel.

Conclusion All users were conscious that they were making a large number of criticisms of detail and yet all were convinced that the *Herald* is a car whose outstanding qualities should not be obscured by these criticisms. It is easy to pick holes in any product and we are aware that there are many good features of this car that space alone prevents from being fully discussed. The car, in conception, is ahead of others in its class, yet it does, in fact, fall short of the high stan-

dards aimed at. Many luxury features have been included – such details as windscreen washers, coat hooks, ashtrays for all passengers, twin visors with passenger's vanity mirror, large boot, emergency petrol tank, outstanding accessibility to the engine, ample pocket space and other qualities already mentioned – and it seems inevitable that some aspects of the finish should suffer, in the effort to keep the price down.

It is significant, however, that the safety measures that are incorporated, and the ease with which crash damage can be repaired, have persuaded one insurance firm, the Cornhill Insurance Co Ltd, to offer a 12½ per cent reduction on insurance premiums for *Herald* owners.

The manufacturer comments

The design of the *Herald* body has been carried out in a manner calculated to give economy of panels and material and at the same time fulfil the main objectives of the project by reducing the cost of repairs and servicing, and to provide comfort and good appearance.

Interior body dimensions, particularly at the rear, are an increase on previous four-seater small saloon models in the same class made by this company and are the equal or surpass most of the *Herald's* national and international contemporary competitors claiming four seats.

By deliberate intention vehicles with a "fashionable crisp edged style" will normally look more delicate than the type of mass production cars British companies have produced until recently. However, *Heralds* have reliably travelled the length of Africa and have already won several rallies, including the award of an Alpine cup, so it can be stated that its structural performance belies the impression sometimes created.

Likewise, performance covering speed and acceleration can be deceiving. Timed results of the *Herald* prove its figures to be well in line with competitive cars of similar size and capacity. It is a fact that the suspension and steering of the *Herald* are such, that the expert driver believes that greater performance is possible in complete safety. Thus, when driven by Mr Everyman at his normal speeds, an inherently much greater margin for error (without mishap) has been created, which must be reflected in greater safety on

the roads.

DESIGN's criticisms are directed at a pre-production model and such items as accelerator pedals, reverse stops and door locks have had attention. Likewise, the speedometer illumination has been considerably reduced, but the trafficator indicator presents a problem in that it demands to be visible even in the strongest sunlight and can therefore be somewhat bright at night. A change to green has been made and creates less impact on the sight.

Brake and clutch manufacturers conservatively recommend a minimum pedal travel of 6 inches for the correct operation of their products, and at 5 inches the *Herald* is obviously not "excessive". On the other hand, for the remaining controls DESIGN's suggested fascia is logical and is receiving investigation, while the door key criticism is perhaps illogical since most household front doors have a Yale, the key of which returns to the central position after unlocking.

Reports filtering in on early customer experience with Heralds indicate that the conclusions reached by DESIGN are in many ways correct.

Criticisms of detail, received from the best proving ground in the world – the buying public – are being followed up, and undoubtedly modifications will be introduced from time to time which will add to the many novel and advanced features which had already made the Triumph *Herald* the subject of acclaim by the world's motoring Press.



Advertising overhead

The high point in the house style of any airline is the treatment of its aircraft markings. British European Airways' house style, born in 1953 with the design of the red BEA square, confirmed in April 1958 by the publication of its *Manual of Design*, will come of age in the spring of next year, when the first of its *Comet 4B's* goes into service with a striking new paint scheme.

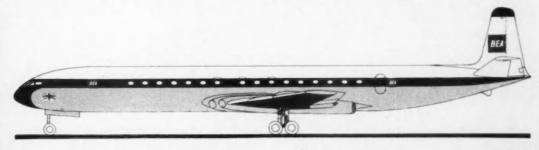
When it became obvious that the existing scheme could not be stretched to suit the Comet and Vanguard aircraft on order, a meeting was called in November 1958 to consider the functional requirements involved. Under the chairmanship of A. J. Burkart, advertising manager BEA (who is responsible for the overall appearance of BEA to its public) representatives of the project and development branch, traffic department, flight operations and air safety branches of BEA stated that the aircraft should be conspicuous and easily recognisable in the air and on the ground; the upper part of the fuselage should be painted white to reduce cabin temperatures; the nose and parts of the fuselage

close to the cockpit should be painted matt black to avoid reflections to the crew; the colour selected should give maximum clarity for reproduction in photographs and on television; and that the new markings should be easy to apply and maintain (which the existing ones are most definitely not).

On the basis of this careful brief John Lunn, BEA's advertising superintendent (supply and design), assisted by Mary de Saulles, prepared a set of drawings. After modification, these were finally agreed in January 1959.

The new markings are effectively simple. A black band along the window line from nose to tail cleanly separates the white painted upper part from the polished aluminium belly and the now familiar red square is prominent on the tailfin. There is one feature which ensures that BEA aircraft will be unmistakable to observers from the ground: the wings are painted bright BEA red. One of our national airlines is discarding its false British modesty with a vengeance, and giving a lead to the world.

K.G.



Improving bus design

For years the commuter in Britain has suffered from inadequate bus design; discomfort and lack of room are only two of many unwanted features. In this article the author states a case for radical re-thinking in the initial design stages, and compares present bus designs in Britain with those on the Continent.

DENNIS GILL

In recent years there has been a marked decline in the number of passengers carried by town buses. More and more people are turning to other forms of transport – to private cars, mopeds and the new diesel trains. All this indicates that people are not satisfied with their buses, and this was particularly underlined last year in London, where discontent among both busmen and passengers resulted in strikes, and at Finchley in the introduction of pirate bus services.

It is not difficult to see why commuters have drifted away from the town bus; it is one of the most uninspiring vehicles on the road today, and fully deserves the Manchester Guardian's description - "a stage coach in a new bonnet".

But what of the bus of tomorrow? How is the industry going to increase its appeal to passengers in order to meet competition from the private car, and to attract greater revenue?

London's bus of the future will be the Routemaster. Considering that nothing was taken for granted when it was being designed, this bus is disappointing. To the layman it will probably appear to be little different from its predecessors. Only the front, which has been designed with a new grille, giving a short snout, will show it to be the latest model, for all the orthodox features – entrance at the rear, open platform, moquette seats, mobile conductor, to mention a few – are still there.

This is not to say there are no new features for the passenger to appreciate. Heating has at last been provided, and pneumatic suspension incorporated to give improved riding. To ease the task of the driver, power-assisted steering and automatic transmission have been fitted. On the other hand, conditions for the conductor remain unchanged, except that there is now sufficient standing space for him beneath the stairs.

The Routemaster represents a considerable step forward in engineering. A lightweight, chassisless form of construction has been evolved to minimise fuel consumption and tyre wear. This is good, and regard has obviously been paid by the designers to the way in which the Routemaster would fit existing maintenance techniques.

More attention might, however, have been paid to the purpose of the bus. The orthodox layout retained in the Routemaster is suitable when passengers are travelling fairly long distances, and require a seat; but it is unsuitable for passenger transportation where traffic is heavy and where there are large numbers of shortdistance riders to be carried.

Continental commutation

For town travel the Germans have turned to large capacity vehicles with through circulation of passengers; fares are paid on entry. On the 34-ft long Orenstein-Koppel double-decker, for example, 60 seated and 38 standing passengers are carried (compared with 64 seated passengers, and five standing only during rush hours, on the 27-ft 6-inch long *Routemaster*). The passenger is glad of the increased standing space because his first concern is to get to his destination as quickly as possible, and he would prefer to stand during rush hours in a large-capacity vehicle and be getting there, rather than stand in a queue and be getting nowhere while waiting for a seat in a limited capacity vehicle.

Through circulation is attained by having an entrance and staircase at the rear, and another staircase and two exits at the front; consequently passengers can board at the same time as others alight, thereby saving time at stops. Delays from the system of fare collection are cut to a minimum by providing a spacious rear platform on which passengers can stand while waiting to pay their fares. A cash desk fitted with ticket and change-giving machines enables a straightforward transaction to be completed in under two seconds.

The cash desk certainly makes the conductor's work pleasanter. He no longer has to fumble for change or rush hither and thither for fares; he is more efficient because he has a seat and his work is simpler and less strenuous. He does not even have to count the number of vacant seats upstairs. This is done by a passenger counter which is worked by two electronic eyes – the one on the 'up' staircase adding, the other on the 'down' staircase subtracting.

Entrance and exits on the Orenstein-Koppel bus are fitted with power-operated doors under the control of conductor and driver. These doors are essential, because apart from keeping out the cold they considerably reduce platform accidents and prevent people from boarding when the bus is full. On the whole the commuter in Germany is well catered for, and such features as public address systems and heaters are now installed almost as a matter of course. Interior finishes are very pleasing. Leather and hide, and synthetic materials









British

1 The Routemaster, developed by London Transport in association with AEC Ltd and Park Royal Vehicles Ltd, is to replace London's present bus. While on some buses the destination indicators are not clearly readable, those on the Routemaster are well designed.

2, 3, 4 Leyland Atlantean with MCW 78-seater body. Only the flush front of this vehicle is pleasing in appearance. From the side and, in particular, the rear the appearance is completely spoilt by the notch effect resulting from the separation of the rear engine from the body.

5 A Park Royal front-entrance body fitted to an orthodox AEC chassis. The window at the bottom of the sliding door enables the driver to see whether any small children are waiting to board.













Foreign

- 6, 7 Through circulation of passengers, particularly desirable in town buses, is a feature of the Orenstein-Koppel double-decker. Passengers pay fares on entry to the seated conductor. The design is spoilt, however, by the lowered upper saloon gangway, small windows, inadequate destination indicators and unnecessary flashing over the radiator grille. Interior photograph 7, by courtesy of Bus and Coach.
- 8, 9 Apart from a mournful front end, this Mercedes-Benz bus is well designed for town travel. There is ample glazing, the interior is clean and refreshing, and there are sufficient hand-rails and grabs. Photographs by courtesy of Passenger Transport.
- 10 To win back passengers, some American operators are turning to designs like Mack Trucks' But of Tomorrow. It offers the traveller a luxurious muralled rear lounge, air conditioning, a radio talephone, crash padding, fluorescent lighting and spacious foam rubber seats with high backs. The designer, Alexis Sakhanoffsky, said his aim was to improve vision, comfort, safety and appeal to women, who are major bus users.
- 11 The prototype Tuscher-bodied FBW service bus for Zurich, in which the driver is seated higher than usual. Photograph by courtesy of The Commercial Motor.

such as pagwood are used extensively, blended with light colours to give a refreshing atmosphere which lasts well. Moquette, which for some obscure reason still finds favour on many public transport systems in this country, is rarely used.

A refreshing change in Britain

In all this there is a great deal to be learned, and it is encouraging to note that some attempt has recently been made in this country to move away from the orthodox layout. This is illustrated by the 30-ft rearengined, front-entrance Leyland Atlantean, which is now coming into service. It seats as many as 78 passengers, and there can be little doubt that its appearance on the roads will result in the recapture of a certain amount of lost traffic; previous designs have not catered for passenger and road staff requirements to the same extent as the Atlantean. A rear-mounted engine gives exceptionally quiet riding, reducing strain; the low front-entrance platform makes boarding and alighting easier; the door is power-operated by the driver, giving safety to the passenger and enabling the conductor to concentrate almost entirely on his principal task of collecting fares; and the interior is reasonably attractive in finish and is also warm, heaters having been fitted.

Such features have brought forth favourable comments. But the same cannot be said of the external appearance at the rear end, which is ambiguous. Separation of the engine from the main body has resulted in a notch effect, giving the appearance of a back-to-front double-decker. Although it is difficult to see how this defect can be remedied and still prevent transmission of engine noise to the body, it is to be hoped that an improvement will soon be made. However, the *Atlantean* represents a refreshing change of outlook. Already it has brought Leyland's and the body builders, Metropolitan-Cammell Ltd, orders totalling some £2·5 – 3 million.

Perhaps the Birmingham and Midland Motor Omnibus Co (Midland Red), has discovered the right answer to the engine position problem. This operator, which builds its own buses, has announced a new design of 30-ft front-entrance double-decker, seating 79, with an underfloor engine mounted amidships. As in the *Atlantean*, the entrance will be forward of the front wheels, with the doors under the control of the driver. Other front entrance bodies are now being produced, but these are being fitted to orthodox chassis, the platform being positioned just rear of the front engines.

While these buses might find favour in some quarters, there is nevertheless still room for improvement, and new conceptions in design are urgently required. It

would perhaps be a good idea if operators, manufacturers and the Ministry of Transport were to set up a committee to look into basic considerations and to evolve a modern town bus with widespread appeal and standardised features.

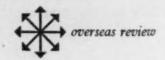
Standardisation on such details as handrails, grips and stanchions, for example, is particularly desirable. These should be frequent, because throughout the bus the passenger requires something to hold on to. London Transport has established that stanchions are an aid to passengers and that they should be arranged for the passenger, on entering, to grasp the first with his right hand. Too many operators appear to have overlooked such matters.

To help the passenger

A committee to encourage new ideas in bus design to further passenger comfort and convenience was set up a few years ago in America, where the decline in passengers has been most marked. Mack Trucks' Bus of Tomorrow was the outcome. Painted in metallic bronze with a white trim it features such innovations as a wrap-around windshield, large side windows, air conditioning, radio telephone, a rear lounge with an illuminated Lucite mural, and interior foam-rubber crash padding.

This might be taking matters to extremes, but some research on bus design in this country is required. It might even show that the double-decker is not, after all, the most suitable vehicle for mass transportation. On the Continent, both Germans and Dutch are experimenting with articulated single-deckers designed to carry as many as 150 passengers and cleverly contrived to negotiate sharp bends and hump-back bridges. In Zürich a prototype single-decker has been constructed with the driver's cab on the roof, leaving practically the whole inner area for passengers. This development will give the driver improved vision all round, and enable him to overlook the cars in front, which will be helpful when overtaking; it also has the advantage that there will be no dazzling from outside and no light reflections from inside.

Developments such as these show that there is much ground to be covered by the bus industry in this country. Operators must be prepared to throw traditions overboard, and to adapt themselves to changing conditions, while much more imagination will have to be shown at the initial design stages if competition from other forms of transport is to be met successfully. It is not enough to put up posters saying it is better to travel by bus, because at the moment it just is not true.

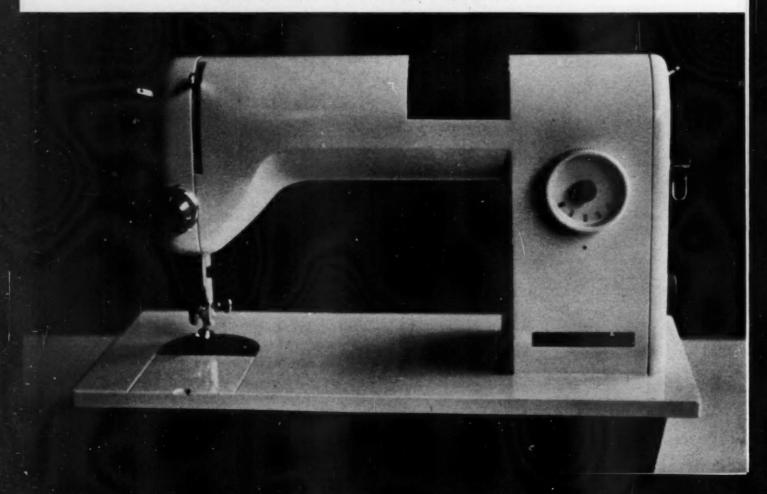


Japan Industrial design renaissance

HISACI YAMAMOTO

Both the Japanese designer and manufacturer possess considerable adaptability. This has become increasingly evident in the last 15 years during which Japan has gone through a transition from an under-developed industrialised nation to a strong competitor in world markets. The flexibility of the Japanese designer in meeting rapidly changing fashion has taken and will continue to take trade from countries which although well advanced in production techniques, stubbornly refuse to lead in design. DESIGN'S Japanese correspondent describes his country's development and discusses the continuing efforts to stimulate good modern design. Japan's growing concentration on the European rather than the American approach to design suggests competition with Britain in American and Far Eastern markets.

First prize in this year's Japanese Industrial Design Competition was gained by this domestic sewing machine (see also page 57). DESIGNERS M. Katsuyama and K. Hamada. SPONSOR Japan Sewing Machine Co Ltd.



Before the war, Japanese goods were generally known to be cheap but poorly made, and such an opinion was expressed even in Japan. But today Japan is striving to compete with other countries in international markets and is slowly becoming established as an originator of good modern design.

In reviewing the history of Japan's industrial development, it must be remembered that for some 250 years, until 1868, the nation had been entirely isolated from other civilisations. With the return of the Imperial régime in 1868 the policy of national isolation was reversed. The influx of information that followed this, showing the industrial advance of other countries, astonished the nation and it was considered imperative for the country to overcome its back-log of development as quickly as possible. The urgency increased through the occurrence of the Sino-Japanese and Russo-Japanese wars.

In a country half as large again as Britain the population today numbers some 90 million. Yet only about 18 per cent of the land is arable compared with over 70 per cent in Britain. Most of the population today resides in the central and southern areas near the Pacific Ocean, and in greater Tokyo alone there are over nine million.

In an attempt to overcome many years of slow industrial development, and so compete on equal terms in world markets, it was necessary for Japan to import manufacturing equipment and follow the existing engineering techniques of its competitors. Under such circumstances it is not surprising that the articles produced were little better than copies of competitors' goods. But realising that the country's economy could not depend entirely on the import of foreign equipment, there was a strong move to carry out research and development in engineering techniques and so make the nation industrialised by its own efforts.

The turning point in Japan's design policy came soon after the second World War, during which the nation had been forced to manage on its own. It effectively reminded industrialists of the nation's own creative talent, almost hidden by the influence of European civilisation. At this time a small number of designers broke away from the main body, and formed a group from which the Japanese design renaissance stemmed. This group included such designers as Jiro Kosugi, Shozo Sato (originally an engineer), Katsuhei Toyoguchi, Bunro Matsumoto, Tokujiro Kaneko and Yoshio Akioka.

Effects of allied occupation

During the years of military occupation the industries lacked initiative, and there was little call for professional industrial designers. The one exception was in the manufacture of furniture, where the requirements of the occupational armies were such that furniture manufacturers had to employ consultants; so began a slow improvement in the Japanese designer's status. Previously he had been regarded as possessing aesthetic appreciation but lacking a practical approach.

It was not until 1949 that the first contract between a consultant designer and manufacturer was recorded; Jiro Kosugi was appointed consultant designer to the Toyo Kogyo Co Ltd, and designed the front cover of a small tricycle truck. Some years later this same designer added to his already high reputation by designing a sewing machine for the Janome Sewing Machine Co Ltd. His design, coming at a time when the firm was in financial difficulties, sold well and the manufacturer is now enjoying increasing prosperity. In similar circumstances the Nissan Motor Co Ltd, approached Shozo Sato to design a car. The result, the Datsun, was equally profitable for the maker. Both these cases are still

referred to in Japan as examples of excellent design, and act as a reminder of the manner in which design can influence sales. The two designers mentioned are generally regarded as the leading industrial designers in Japan today.

Training designers

As long ago as 1900 a faculty of industrial design was founded at the Kuramae Technological School. (This school preceded the present Tokyo Technological University.) The rapid Japanese development in graphic design and industrial art which occurred in the 'twenties could be credited to the



In a country 1.5 times larger than Britain (shown here to the same scale) Japan with over 90 million people, has the fifth largest population among all other countries. The population is concentrated around six industrial centres.

efforts of the older graduates of the school. But at the faculty's inception, Japan's concept of industrial design applied only to craft based articles, and only later were the wider avenues of industrial design explored. Today there are six faculties of industrial design at the universities, technical and art colleges throughout the country. However, places are limited and only about one in 20 students who apply gain admittance. As in Britain there are only a few designers of repute who are self-taught; Bunro Matsumoto is such an exception.

The country has its own designers' organisation known as the Japan Industrial Designers' Association. Membership totals about 60, one-third of them being free-lance consultant designers. In many cases a designer may act as consultant to several firms with widely differing products; in general this is due to the scarcity of industrial designers in the country. Outside the association, there are altogether about 400 designers engaged exclusively by firms; they continue their studies under the firms' consultants.

There is an increasing demand by the larger manufacturers for young talented designers. Here the *Industrial Design Competition*, annually sponsored by the Mainichi Press, is a great help in giving the young designer a chance to become established. Although the design renaissance in Japan is still young, this year's competition was the seventh.

Considerable efforts towards improving design have been made by the Industrial Arts Institute of the Ministry of International Trade and Industry. The institute was active in the field of industrial art from the 'twenties until the war, but since then, due largely to the efforts of Katsuhei Toyoguchi, it has turned to stimulating good industrial design. A novel feature of the institute is its service to manufacturers



in designing articles or giving advice on specific projects, and this year has seen the introduction of ergonomic studies and fundamental research on mass production systems and even raw material manufacturing. To this end the institute collates a large volume of data on engineering techniques, and also possesses various test equipment.

European standards adopted

"Why do industrial designs in Japan today differ so greatly from traditional styles." This question is often asked; a superficial answer is merely to say the introduction of European production techniques necessarily induced the manufacturer to follow European styles. A more substantial reason might be that the Japanese standard of living today closely aligns with European standards, particularly in the larger cities. The younger generations, discontented with static Japanese culture looked elsewhere for higher standards and different ideals. While American standards of living were attractive to the Japanese, they were economically inapplicable.

Thus under the guise of modernisation, European rather than American living standards have been adopted and it is surprising to note that today the younger Japanese are more familiar with the fine arts and music of Western countries than with their own. As a result the overbearing traditional influence on design has declined.

Such radical changes have been welcomed in Japan and the adoption of European standards is nearly completed. This applies also to industrial design techniques. But while the designs have the appearance of the Western idiom, they have always retained something of that faculty peculiar to the Japanese designer, and this is again becoming evident as the country recovers its independence.

"The Japanese government is promulgating a law intended to protect both home and foreign designs" said F. Kai, director of the Japan Export Trade Promotion Agency, when he visited The Design Centre recently.



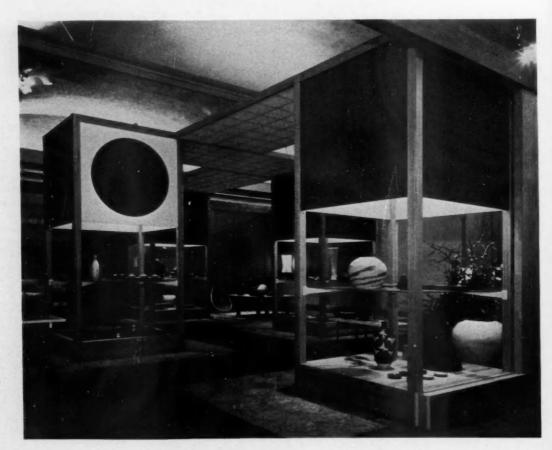


GOOD DESIGN LABEL

issued by the Japan Chamber III Commerce & Industry Registered design No 135261

The manufacturer of the item with this label guarantees that the item is identical with that which was selected as a good design by the Design Council all the Japanese Government.

The label issued by the Japanese Government for exports selected by the Committee of Design Promotion, a group of practising designers.



This model room was displayed at the US World Trade Fair in 1957. It was prefabricated in Japan and knocked-down for easy transportation. The exhibits included lacquerware, ceramics, glass and fabrics as well as furniture, all displaying traditional Japanese craftsmanship. DESIGNER Industrial Arts Institute.





While other countries are apparently more technically advanced, Japan is mass producing a wide variety of transistor receivers, tape recorders and the like. These are claimed to be functional yet competitive in price, and the examples shown here indicate the high standard of design. RIGHT Transistor radio TR 610 (mainly exported to USA). DESIGNER Kozo Yamansoto. MAKER Sony Corporation. FAR RIGHT Transistor radio. DESIGNER Masa Minagawa. MAKER Fuji Electric Manufacturing Co Ltd.







Four stages in the development of the Mazda three-wheeled light truck. The original model was redesigned in 1949, LEFT, by an industrial designer. This was the first case of a Japanese consultant designer being engaged by a manufacturer. CENTRE, the 1956 version; BOTTOM LEFT the 1958 version and BELOW, the latest model. DESIGNER Jiro Kosugi. MAKER Toyo Kogyo Co Ltd.

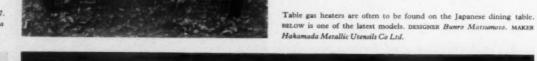






Bunro Matsumoto began his career as a furniture designer and subsequently has widened his activities to include general industrial design work. His designs have always taken into consideration ease of manufacture as well as consumer requirements. The children's table is a recent example of his work.

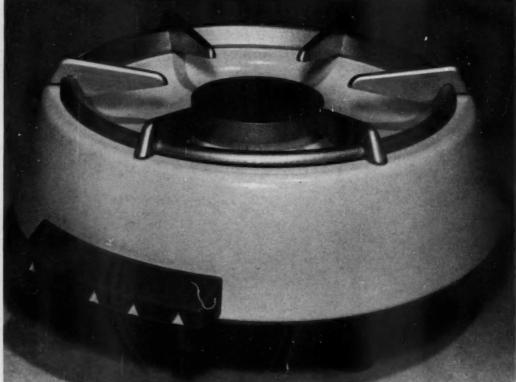
An elegant electric fan designed in 1957. DESIGNER Jiro Kosseji. MAKER Matsushita Electric Industry Co Ltd.

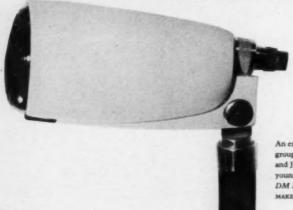






ABOVE Western type kitchens are becoming increasingly popular and already demand exceeds the supply of this recent sink unit. DUSIGNER Bustro Matsumoto. MAKER Hakamada Metallic Utensils Co Ltd.





An example of the work of a design group which includes Yoshio Akioka and Junnosuke Kawa as well as several young designers. Dynamic microphone DM 163. DESIGNER Kak Design Group.
MAKER Primo Co Ltd.

1959 Japanese industrial design competition

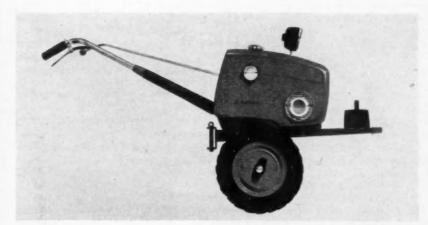
Every year the young Japanese designer has a chance to compete in the *Industrial Design Competition* organised by the Mainichi Press. It is the only competition of its kind in Japan and is always keenly contested. This year's was the seventh. All entries were said to emphasise a practical approach to design, showing how closely the designers had studied existing manufacturing techniques.

Subjects of design are stipulated by an invited sponsor; the organisers then advertise detailed requirements and request competitors. The competitor submits a sketch, detailed drawings and explanatory description of his design,

and many provide models in addition. It is the task of each sponsor to select several of the better designs for his subject, and pass these to a committee for final judging.

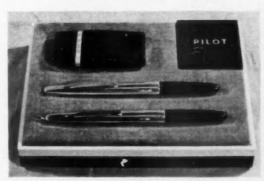
Each winning design for a set subject gains an award. From the final selection four further awards are made by the committee for the best of these designs; should any sponsor wish to obtain the rights of another design in his section, then he awards the designer a sponsor's prize.

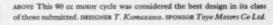
In this selection of illustrations of this year's winning designs, the high standard being achieved by young Japanese designers and students is clearly indicated.

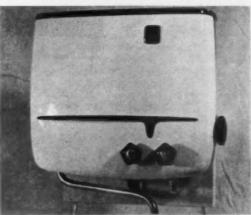


Although the Kubota power cultivator was considered to be rather in the American idiom it gained second prize. DESIGNERS R. Honda, H. Yothioka, N. Cho and K. Nishisawa. SPONSOR Kubota Iron Works Co Ltd.

The winning design in the competition is to be seen on page 52.







The two third awards went to a fountain pen, CENTER LEFT, and the Paroma water heater, LEFT. Fountain pen: DESIGNERS S. Tsukamoto and W. Nishiyama. SPONSOR Pilot Fountain Pen Ce Ltd. Water heater: DESIGNER T. Aoki. SPONSOR Kobayashi Works Co Ltd.



USA: communications in conference

ABRAM GAMES

The author, the distinguished poster designer, was one of three British speakers at this year's International Design Conference at Aspen, Colorado. He describes here his impressions of the conference which had as its theme Communication: the Image Speaks. The predominantly American audience, it is reported, was deeply impressed by the British speakers who included, in addition to Mr Games, Lancelot Law Whyte, scientist and philosopher, and Lancelot Hogben, mathematician.

In the resuscitated Rockies ghost town of Aspen, over 700 designers, typographers, architects, photographers, teachers, students, advertising and business men assembled last June for the ninth *International Design Conference*. The atmosphere was informal, the huge marquee suffusing the light of the sun beating through it. Volunteers worked feverishly to complete the exhibitions of work by members of the panel and by American and Canadian designers. The American work was smoothly and efficiently brilliant; the Canadian work, obviously by young designers, exciting and free of clichés.

Morton Goldsholl, programme chairman, explained the subject of the conference, Communication: the Image Speaks, by underlining the designer's place as communicator in a widening world. The image, the means of communication for the designer, would be examined and debated, so that all could absorb and learn. Bruce MacKenzie, editor IBM Journal of Research and Development, in his keynote speech calmly drew a frightening picture of the growing power of the machine; the computer which started with 20 per cent accuracy and finally achieved 95 per cent correct answers to thousands of questions fed into it. Man must remain master of the machine whilst recognizing and respecting its potential. This was a speech which left the audience much to think about. Films in the evening by Professor Tom Folds of Northwestern University, dealt with the growth of art forms and images, and were followed next day by Cycle 1, The Image Evolves.

Man as image

Lancelot Law Whyte, English scientist and philosopher, spoke with impressive clarity (against a background of photographs of the hands of Edith Sitwell) demonstrating his theory of the "dimensional image". His speech was fresh and provoking, the audience recognising immediately the power of thought expressed. Mr MacKenzie again focused on the man-machine image, the machine itself an innocent development, but casting doubts on man himself as controller. The writer saw the true image as man himself, a universal symbol, and decried the false idols of atom bombs, rockets and reliance on their powers.

Cycle 2, The Printed Image, provoked a heated exchange of ideas between market researcher, William Capitman, designer Jim Real, and William Golden, creative director, CBS Television. Mr Capitman led off with a justification of his methods as a "mistake-insurance", available to US industry and designers. Images should and could be researched and market tested. Seeing this as a danger to free thought and initiative, Mr Real cleverly gave examples of market research gone mad. Mr Golden, previously strongly critical of conferences and research, swung round in favour of this conference and supported a measure of intelligent research in image forming. Lancelot Hogben, English mathematician, sidestepping the three-cornered debate, concentrated on his methods of visual aids as an educative medium,

so finely demonstrated by his exhibited books, Mathematics for the Million and Man Must Measure. This sort of printed image, he felt, could influence the growing world.

Communication with films

The final cycle, The Film Image, preceded by four evenings of intense film-going, and with four outstanding speakers, was perhaps most successful of all. Moderator Saul Bass obviously regarded the film as the most important of our visual communication forms. Jerry Schnitzer, who makes advertising films of a high order, spoke of the difficulties of maintaining high standards in a field where direct sales results were expected, and any means were considered fair. Norman McLaren, whose abstract films are well known, spoke of the task of imbuing squares, triangles and circles with personalities, so that by animation they might reflect human emotions and behaviour. Roman Vishniac, photographer, philosopher, scientist, and maker of a beautiful film of reflections in water, captivated the audience. He spoke of the humanities in relation to science and the image in simple and expressive terms. The artist must never complete his image, which must be completed by the viewer from his emotional and intellectual resources. A true work of art can result only from much unacknowledged experience. The film image should use reality as the basis of abstraction. This was a great and endearing speech. Gilbert Cohen-Séat of France, film philosopher, revealed his work in connection with psychiatric studies and its relationship to human problems. He showed experimental films which measured response, and which demonstrated how responses could be changed by the prolongation or curtailment of selected frames.

Mr Hogben's summary speech critically examined the conference, while praising its purpose and sincerity. Finally Mr Vishniac dashed in where Mr Hogben ended, to round off the week with a memorable and thrilling speech based on his own evaluation of the worth of the conference discussions, and which brought the house down.

The conference closed with the following resolution (the first in its history) which was passed unanimously: "We are aware that we do not exist and work in a vacuum, and that we as human beings must suffer the consequences of our action or inaction. We fully welcome the benefits of technology but shall resist whatever we believe to be its misuse. We accept the principle implicit in the historic experience of mankind that when faced with extraordinary crises his quality of spirit has avoided self-destruction. We place our skills at the disposal of those agencies or organisations who work for a better understanding between the peoples of the world and the survival of mankind".

The theme of the ninth conference had, to my mind, been fulfilled. The image had spoken, and taken a stand. Altogether this was a most worthwhile and exciting week, which banished any misgivings I originally held as to its usefulness. If designers are to meet and discuss their problems then such an occasion is ideal.

Copies of the complete set of papers given at Aspen can be obtained from the Secretary, 6 East Lake St, Chicago 1, Illinois, U S A. Price \$10.

Miscellany

Office furniture

There are very few competitions for furniture designs in this country, and the organisers of the recent competition for wooden office furniture, sponsored by The Timber Development Association Ltd, hoped that it would stimulate a great deal of interest among furniture designers. A prize of £500 was offered to the designer of the best office furniture system, and additional prizes were offered for the design of individual items such as desks, chairs and storage units.

The assessors were, however, disappointed by the response to the competition. Very few furniture designers submitted entries – the majority were sent in by students and architects, and most of these, the assessors felt, fell short of the standards they required. However, several designers may have been discouraged by the rules of the competition, which was held in two stages, and extended over 18 months. For the first stage competitors were asked to submit detailed working drawings. Competitors whose designs the assessors felt were worthy of development were asked to proceed to the second stage, collaborating with a manufacturer

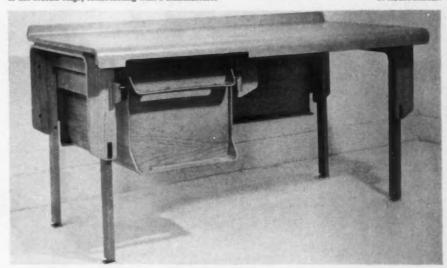
to produce full-sized prototypes.

The assessors, however, reported that none of the entries submitted was of outstanding merit, and that very little original thought had been given to the problem of office planning and new methods of storage.

The most interesting designs, BELOW, were put forward by two young furniture designers – Martin Grierson and Keith Townend. They submitted an office suite in moulded plywood, and the assessors felt that the furniture made full use of the structural possibilities of this material. Although they considered that the design had several disadvantages which prevented it from being fully efficient, the assessors considered it was worthy of a special prize and recommended that further study and development should be given to the system. The prototypes were made by The Shannon Ltd.

B. McGEOGHEGAN





Electric water heater

One of DESIGN'S correspondents, B. M. Howard, recently tested the new Creda Corvette in her home. After using the heater for a month the tester reports:

"Although there are several gas heaters of a similar nature on the market, this is the first electric powered appliance which heats water to a range of required temperatures, including boiling.

"The Creda Corvette, made by The Simplex Electric Co Ltd, measures only 16½ inches high, 8 inches wide and 7½ inches deep, and costs £12 4s 10d, including purchase tax. It has a metal base (in red or turquoise), a heat resisting glass flask, filling hose, outlet spout and a 6-ft length of flexible power cord. It can be easily fixed to either wall or window sill. However, as the heater must be within reach of the sink, it may be necessary to have a three-pin 13/15 amp power point installed, since power points are not usually fitted near a sink. Consumption is 3 kW and voltages range from 200 to 250.

"Any quantity of water from a cupful to a gallon may be heated to the temperature required – tepid for culinary purposes, hot for shaving or washing up, very hot for hot water bottles, etc, boiling for tea or coffee making. A pilot light glows until the required temperature is reached; if the water boils the light continues to glow and a warning whistle sounds. (In the model tested, however, the whistle was unreliable, irrespective of the quantity of water boiled.) As an added safety device there is a protective cut-out to prevent the element from overheating if it is allowed to boil dry. The heater is easy to keep clean, and descale where the water is hard.

"The quantity markings on the flask and the pilot light are easy to read, but the heat control knob would be easier to set if the knob turned above rather than below the horizontal, as one's hand obscures the temperature markings. The nozzle on the filling hose can be simply adjusted to fit any size of tap and the hose itself can be conveniently stowed away on the clip when not in use.

"The shape of the outlet tap makes it easy to grasp and turn, even with wet hands, but it is difficult to open or close the tap in one movement, and there is unfortunately no marking to show whether the tap is open or closed. The outlet pipe of chromium-plated copper needs insulation as it is easy to burn oneself on it and until it has cooled one cannot move it out of the way without a cloth.

"The Corvette is economical and easy to use, particularly when only small quantities of water are needed. In an electric kettle sufficient water to cover the element must always be heated, and this may sometimes be two-thirds of the kettle's capacity. Other advantages over the electric kettle are the capacity and the fact that water can be kept at a thermostaticallycontrolled temperature, eg, just off boiling for replenishing the teapot.

Boiling times were:		After heater ha
1 pint	1 minutes	† minute
3 pints	34 minutes*	3 minutes
8 pints	9½ minutes	9 minutes
* A 2 kW electric	kettle with new	element took 5

minutes to boil 3 pints."

Imagination becomes fertile only when it finds the ideal outlet.

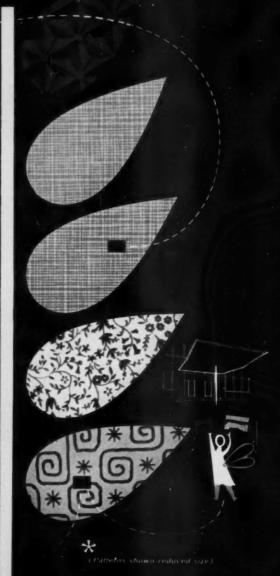
Yet the right means of expression may itself be a powerful stimulus.

For the architect and designer, the WARERITE idiom both expresses and stimulates. It offers a wealth of material to match the mood of his creative effort.

Rich harmonies or the occasional condiments of discord, broad patterns to impose exciting rhythms on space or neat patterns of colour to create tactile impressions—all these the designer can draw upon.

WARERITE laminated plastics have that intangible but unmistakable

Consulty our local WARERITE Specialist



Look to WARERITE

for Design Leadership

A product of BAKELITE LIMITED



12 18 Grosvenor Gardens London SW1 St Oane 0898

MISCELLANY

Unit flexibility

It is customary for most well designed shop fittings to be specially made, but the new Selphast 75 unit planning range recently introduced by Harris & Sheldon Ltd is a notable exception. This is an important new development in shop fitting. Small and large shops of almost every trade can be fitted out with a family of counters and wall fittings capable of almost inexhaustible variations of arrangement. Other specially designed fixtures are also available for various types of specialised merchandise, such as cosmetics, cutlery, electrical goods, etc.

The basic units ABOVE LEFT are easily adaptable for



ordinary sales, self-service or self-selection. Their original design and development is interesting. In 1957 the ground floor of Bourne & Hollingsworth's Oxford Street store was re-styled by the American architects, Copeland, Novak & Israel; the shopfitting was carried out by Harris & Sheldon. Using the new type of fixtures developed for the store ABOVE RIGHT as a basis and adding to it its own considerable experience, the design department of Harris & Sheldon now has this excellent



range in general production. The fixtures are constructed in Honduras mahogany, veneered blockboard, and 1-inch sq section mild steel tube, finished in satin chrome; other surfaces are cellulose finished. Handles have recessed white plastic strips to allow for easy labelling. Individuality can be obtained within this standardised framework by the use of special timbers and finishes that are available at slightly extra cost.

ALEC HEATH

Reading electricity meters

Some electricity boards are attempting to interest their consumers in reading their own meters and making their own returns. By this means many of the journeys by trained staff, who may often pay several calls before finding the householder at home, can be eliminated. But for many householders the presentation is unnecessarily complicated. To interpret the total number of units indicated on a common type of meter BELOW, left, the dials must be read left to right (bottom row first), and, top row, right to left. Adding to the confusion, adjacent dials rotate clockwise and anti-clockwise.

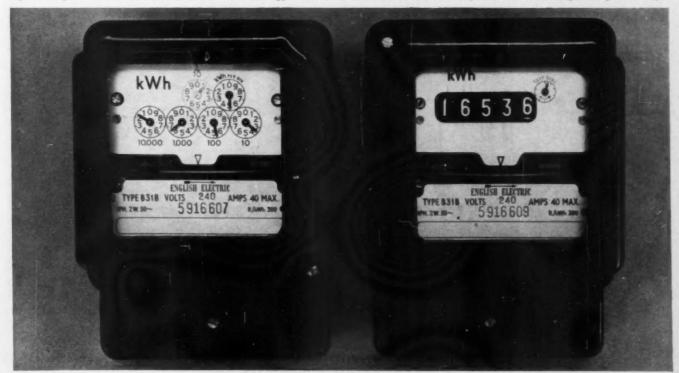
In the illustration, are both meters set to the same reading? To identify that on the left takes considerably longer than reading the cyclometer version, right. Digital reading versions were in use some time before the war, but in the main have been replaced by the multi-clock types. The arguments against cyclometer models have been mainly technical; for example the brass gears were said to lock solid on occasions, while numerals rolled slowly between digits, giving difficulty in reading intermediate positions.

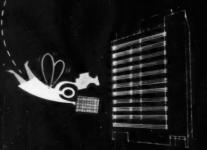
The English Electric Co Ltd, which manufactures both meters illustrated, has introduced the feature of impulse operation, the dials jumping one complete digit. The maker believes the later cyclometer version to have great possibilities as it costs only some four per cent more. Yet despite tentative experiments by some electricity boards there is no general move to install easily read meters with the consequent reduction of overheads.

DESIGN approached various boards on this matter.

With progressive thinking, the North of Scotland Hydro-Electric Board is adopting cyclometer-type registers. A more typical attitude was expressed by a spokesman for another board who said he was convinced of the need for cyclometer reading meters which had proved successful in tests, and for some time has been trying to interest his board in them. However, opinion remained strongly divided.

An indication of the possible savings involved can be seen from the plans of one electricity board which hopes to save more than £10,000 a year by eliminating one quarterly reading and submitting an estimated account. Thus any scheme in which the householder can take part by reading his own meter would result in considerable economies; but the householder can only assist if the meter reading is intelligible. M.J.B.





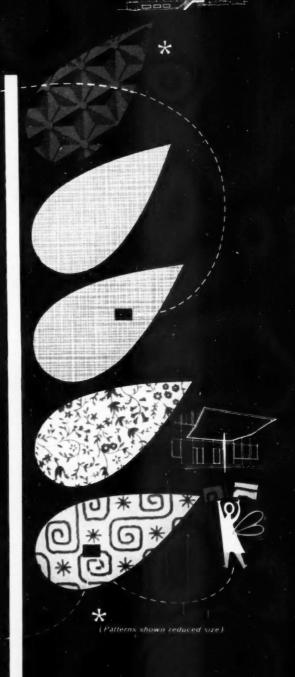
Imagination becomes fertile only when it finds the ideal outlet.

Yet the right means of expression may itself be a powerful stimulus. For the architect and designer, the WARERITE idiom both expresses and stimulates. It offers a wealth of material to match the mood of his creative effort.

Rich harmonies or the occasional condiments of discord, broad patterns to impose exciting rhythms on space, or neat patterns of colour to create tactile impressions all these the designer can draw upon.

Subdued or positive, cool or exotic, WARERITE laminated plastics have that intangible but unmistakable quality of Design Leadership.

Consult your local WARERITE Specialist



Look to WARERITE

for Design Leadership

A product of BAKELITE LIMITED



12 18 Grosvenor Gardens London SW1 SLOane 0898

MISCELLANY

Unit flexibility

It is customary for most well designed shop fittings to be specially made, but the new Selphast 75 unit planning range recently introduced by Harris & Sheldon Ltd is a notable exception. This is an important new development in shop fitting. Small and large shops of almost every trade can be fitted out with a family of counters and wall fittings capable of almost inexhaustible variations of arrangement. Other specially designed fixtures are also available for various types of specialised merchandise, such as cosmetics, cutlery, electrical goods, etc.

The basic units ABOVE LEFT are easily adaptable for

Reading electricity meters

Some electricity boards are attempting to interest their consumers in reading their own meters and making their own returns. By this means many of the journeys by trained staff, who may often pay several calls before finding the householder at home, can be eliminated. But for many householders the presentation is unnecessarily complicated. To interpret the total number of units indicated on a common type of meter Below, left, the dials must be read left to right (bottom row first), and, top row, right to left. Adding to the confusion, adjacent dials rotate clockwise and anti-clockwise.

In the illustration, are both meters set to the same reading? To identify that on the left takes considerably longer than reading the cyclometer version, right. Digital reading versions were in use some time before



ordinary sales, self-service or self-selection. Their original design and development is interesting. In 1957 the ground floor of Bourne & Hollingsworth's Oxford Street store was re-styled by the American architects, Copeland, Novak & Israel; the shopfitting was carried out by Harris & Sheldon. Using the new type of fixtures developed for the store ABOVE RIGHT as a basis and adding to it its own considerable experience, the design department of Harris & Sheldon now has this excellent

the war, but in the main have been replaced by the multi-clock types. The arguments against cyclometer models have been mainly technical; for example the brass gears were said to lock solid on occasions, while numerals rolled slowly between digits, giving difficulty in reading intermediate positions.

The English Electric Co Ltd, which manufactures both meters illustrated, has introduced the feature of impulse operation, the dials jumping one complete digit. The maker believes the later cyclometer version to have great possibilities as it costs only some four per cent more. Yet despite tentative experiments by some electricity boards there is no general move to install easily read meters with the consequent reduction of overheads.

DESIGN approached various boards on this matter.



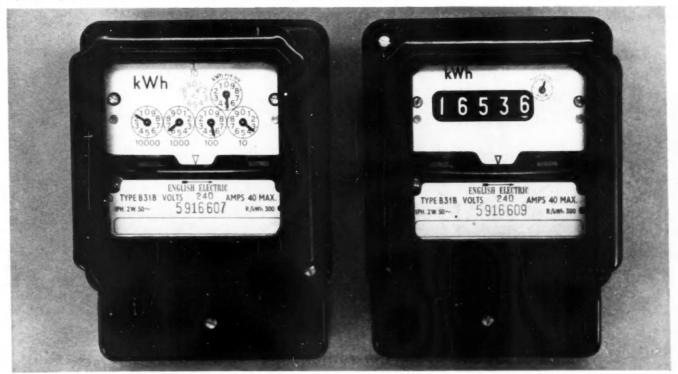
range in general production. The fixtures are constructed in Honduras mahogany, veneered blockboard, and 1-inch sq section mild steel tube, finished in satin chrome; other surfaces are cellulose finished. Handles have recessed white plastic strips to allow for easy labelling. Individuality can be obtained within this standardised framework by the use of special timbers and finishes that are available at slightly extra cost.

ALEC HEATH

With progressive thinking, the North of Scotland Hydro-Electric Board is adopting cyclometer-type registers. A more typical attitude was expressed by a spokesman for another board who said he was convinced of the need for cyclometer reading meters which had proved successful in tests, and for some time has been trying to interest his board in them. However, opinion remained strongly divided.

An indication of the possible savings involved can be seen from the plans of one electricity board which hopes to save more than £10,000 a year by eliminating one quarterly reading and submitting an estimated account. Thus any scheme in which the householder can take part by reading his own meter would result in considerable economies; but the householder can only assist if the meter reading is intelligible.

M.J.B.





Chairs and Settees

Brochure and name of nearest stockist on request or visit our extensive Factory Showroom at our new address.

Open Mon. to Fri. 9 am - 5-30 pm. Sat. 9 am - 1 pm.



"PALMIR/OMEGA" by Howard Keith (7' 2") and as 2 seater.

H. K. FURNITURE LTD., "OMEGA" WORKS, HERMITAGE ROAD, LONDON, N.4

Nearest Underground Station: Manor House

a Noël Villeneuve design



Model TP.8 ceiling mounted or suspended for one 300W or 500W lamp. Brochure series 100



17 MONTPELIER STREET, KNIGHTSBRIDGE, LONDON, S.W.7: KNIGHTSBRIDGE 6897-8

PEOPLE

CoID Scottish Committee resignation

Alister Maynard has announced that he will resign from his post as chief executive of the CoID Scottish Committee next January. Since he took over this post in 1951, the activities and authority of the Scottish Com-



Alister Maynard

mittee have considerably expanded and the exhibitions at the Scottish Design Centre are now a recognised feature of Glasgow life.

After retiring from the Seaforth Highlanders in 1933, Mr Maynard made a reputation in London as a furniture and interior designer, and he will be returning to London in the New Year to operate as a free-lance and consultant designer in these and other fields. He is also a painter whose best work is probably in decorative panels, mainly in the trompe l'osil style.

Lowe monorail

A prototype monorail, which may prove the answer to the London Airport to West End transport problem is to be demonstrated on a specially constructed track in the near future.

John Lowe, managing director of Air-Rail Ltd, the firm behind the scheme, was responsible for the development of the monorail, and described the project to DESIGN recently.



John Lowe

He and his associates have been working on the monorail for more than four years, and Mr Lowe claims that his design is far in advance of any produced in the USA and Germany.

The Lowe monorail will be diesel powered, seat 51 passengers, and run at 80 miles an hour on an elevated prestressed concrete track. Because this particular version is intended to meet the special problems of travel to London Airport (it will have to go through the London Airport tunnel) the monorail has also been designed to run on the road like a bus.

According to Mr Lowe, no demolition will be needed to install the monorail track which will be built about 25-30 feet above the ground alongside railways and roads. The fact that it will have to run as a road vehicle has to some extent dictated the appearance of the monorail car which Mr Lowe describes as "a rectangular box, in no way futuristic in appearance". However, whether or not the design is accepted for further development by the Ministry of Transport, a consultant designer is being called in to work on the interior.

Mr Lowe, an economist, describes himself as fascinated by engineering and engineering problems. He feels that if this idea for a monorail were accepted it would revolutionise travel and give Britain a vital foothold in a market which many others are now exploring. He stressed the flexibility of the basic design, which, he said, could be adapted to solve various types of travel problems – it could be used on long distance routes as well as providing a rapid point to point shuttle service.

Professor to industry

Wyndham Goodden, for five years Professor of Textile Design at the Royal College of Art has recently been appointed design consultant to John Waddington Ltd. He will advise on all aspects of design in the firm's printing, packaging, plastics, games, toys and playing cards divisions.

Professor Goodden was formerly chief officer CoID, Scottish Committee, and is now a member of the CoID 'Design Index' selection committee. He is also a member of the National Council of the Design and Industries Association, and a former chairman of the committee appointed to investigate design standards in the British toy industry. He received an OBE for his work as director of the Living Traditions of Scotland exhibition for the Festival of Britain.

New CoID council member

The CoID welcomes the appointment by the President of the Board of Trade of a new member: Peter Inchbald, managing director of Walker & Hall Ltd, and chairman of the publicity sub-committee of the Sheffield Cutlery Manufacturers' Association.

College appointment

Frank Height, who until recently was in charge of the Furniture and Display Section at the LCC Architects' Department, has been appointed full time tutor at the Royal College of Art School of Industrial Design (Engineering). Mr Height will be working with Misha Black whose appointment as professor was announced in DESIGN July page 63.

Industrial art award

This year's FBI industrial art prize has been awarded to Bernard Holdaway who is a student in the School of Interior Design at the Royal College of Art. The prize, which is subscribed by members of the federation's industrial art committee, is given each year to a final year student of the Royal College of Art, to spend some weeks abroad before entering industry. This year it was decided to select the prize winner from among the students in the School of Interior Design.

Mr Holdaway intends to use the award to study in Brazil and possibly Mexico and the United States. He took his NDD at Kingston School of Art, and he was awarded Royal Society of Arts bursaries in 1952 and 1958.

Lighting director

Roland Boissevain has recently been appointed to the board of Merchant Adventurers of London Ltd. Mr Boissevain has been the firm's sales manager for a number of years. Merchant Adventurers, which is essentially a family concern, this year gained a CoID Design of the Year award for one of its light fittings (DESIGN June page 45).

Chairman of RSA

Oswald P. Milne has been elected chairman of the council of the Royal Society of Arts for the coming year. Mr Milne, who succeeds Sir Alfred Bossom, has been the society's architectural adviser for several years, and a fellow of the society since 1907.

Shopfitters' president

A. P. Gupwell, of A. J. Gupwell (Shopfitters) Ltd, has been elected president of the National Association of Shopfitters.

REPORTS & CONFERENCES

Church design

The World Council of Churches recently organised an international conference in Geneva on the subject of Architects and the Church. During the course of the conference the architects appealed to churches to give greater freedom to church designers, and to use properly run architectural competitions" in selecting designers of new churches. Describing the type of architect who should be chosen by the churches, a spokesman said: "since the Church must speak to the world as well as to itself, men who know the world as well as the Church are to be preferred to those who know only the Church". A further statement read: "The highest standard of industrial design achieved in everyday life should be applied to the furnishings of the church, including all the minor arts such as printing, posters and fabrics". The conference statement has been circulated to church authorities throughout the world. and it is to be hoped that it will have some influence on church design.

World conference for Tokyo

A world design conference is to be held in Tokyo early next year. The delegates, an international selection of designers and architects (including Henry Dreyfuss and Le Corbusier), will meet to discuss problems of industrial design.

Course on glass

A course on glass, organised by the CoID in conjunction with the Glass Manufacturers' Federation, is to be held at 19 Portland Place, London, W1, from October 26 - 30.

The course has been planned for retailers and wholesalers and will include lectures and discussion on the manufacture, design and history of glass. Speakers will include Cyril Weeden of The Glass Manufacturers' Federation, Hugh Wakefield, assistant keeper of circulation, Victoria & Albert Museum, J. D. Cochrane of Design Research Unit, and Caspar Brook, director of the Consumers' Association Ltd. Further details are available from Miss Jean Stewart, retail officer, CoID, 28 Haymarket, SWI.

EXHIBITIONS

Student potters

An exhibition of ceramics was held recently at the Burslem College of Art, by students of the new oneyear full time course for pottery designers, run jointly continued on page 65



Enter-a breathtaking advance in bathroom luxury

Daring advances in architectural design have found expression in recent years. And now-at last-a single idea heralds a new era in bathroom design.

This bold conception, inspired by Formica Ltd-the VANITORY UNIT-can combine in one space-saving advance, handbasin, taps, dressing table drawers, mirrors, towel rail, strip lighting... beautifully surfaced in the colourful range of Formica decorative laminates...all so easy to keep clean.

With Formica decorative laminates you can design your own Vanitory Units to blend exactly with your overall plan...or you can choose from a wide range already produced by over 40 manufacturers. Full information and lists of manufacturers are freely available on request.





FORMICA-THE FINEST OF ALL THE DECORATIVE LAMINATES

FORMICA Ltd, De La Rus House, 84/86 Regent Street, London, W.1.

*FORMICA and VANITORY are registered trademarks

by the North Staffordshire Technical College and the Stoke-on-Trent College of Art.

Considering the course has only been in operation one year, the general standard of work presented was high. An elegant range of teaware shapes was produced on a minor mass production basis and decorated by each student in various styles and decorating methods.

Apart from this major exercise, individual shapes ranging from coffee pots to tea bowls were produced by each student. Exciting use of colour, pattern, texture and form was in evidence, combined with a competent



One of the shapes, decorated by the students.

standard of potting, the obvious influence of the unrivalled facilities of the College of Ceramics. Several overseas students were on the course, giving the exhibition an interesting international flavour.

One section of the exhibition was reserved for illustrating lithographic techniques with particular emphasis on photo-litho, showing the importance of new decorating processes.

The course aims to give potential designers instruction in the necessary technology to enable their designs to be suitable for the production conditions and economic factors obtaining in the pottery industry. From the evidence of this exhibition, this the course has done, but the general drawing standards could be higher.

Credit must be given to W. L. German, head of department, College of Ceramics, and R. H. Marlow, principal of Stoke-on-Trent College of Art, for this unique combination of industrial training and aesthetic appreciation.

Sales up: design down

In spite of glowing reports in the daily Press of spectacular sales increases by the British radio industry, the recent Radio Show was a sad experience to the visitor on the look-out for some sign of progress in cabinet design. Stand after stand displayed the same collection of trite clichés, the same shapes, the same colours and finishes that were to be seen last year, the year before that, and the year before that.

Admittedly the flood of black and brass styling from the Continent has subsided and only a scattering of models in this depraved style was to be seen. A few firms were adventurous enough to introduce satin finished metal trim and no doubt next year all firms will be offering radio and television sets with this as the latest gimmick. One *Ekco* radio certainly showed that this type of finish, if detailed well, can be used to give a clean, fresh look that would not appear out of place in a modern room.

It is this last point which is perhaps the most disturbing aspect of current cabinet design. The influence of the industrial designer is even less apparent this year,

so that the radio industry seems to be out on a limb with only tenuous connections with other developments in furniture and interior design, or indeed with other industries making powered domestic equipment. Wood finishes are glossier than ever before and anybody with a house furnished with modern pieces would be hard put to it to find a set that did not look completely incongruous in such an environment.

In an industry which symbolises more than any other an age dependent on advanced communications techniques, this negative attitude to design is particularly difficult to understand. Most cabinets seem to be a compromise between a piece of furniture and a piece of technical equipment. Such compromises are seldom satisfactory and a positive attitude is hardly to be expected until the industry makes up its mind which of the two approaches it intends to adopt.

J.E.B.

Design Centre displays

Design in Lighting, until November 7, a display organised as part of the golden jubilee programme of the Illuminating Engineering Society. The exhibition consists of two room settings, a display of light fittings for home, office and shop, and displays giving advice on lighting problems. Pick of the Packs, October 12 – November 7, a selection of some 50 examples of packaging from the types in current use (see Pick of the Packs, RIGHT); and, November 2 – 28, a furnishing scheme for a doctor's waiting room and surgery.

Packaging in Museum of Modern Art

The International Packaging Exhibition, which is now on show at the Museum of Modern Art, New York, closes on November 8. Several hundred examples of consumer and industrial packages from 10 countries are on show. The aim of the exhibition, according to its organisers, is to stress the structural, as well as the aesthetic qualities of the best of today's packs.

Precept and practice

An exhibition of work by the staff of the LCC Central School of Arts and Crafts will be held at the Ceylon Tea Centre, Lower Regent Street, W1, from October 26 – November 16. The title of the exhibition is *The Artist Relates* and the exhibits will include furniture, textiles, engineering products, and graphic design, etc, all designed by the staff of the central school.

Light landslide

In the Design Awards 1959, organised by the Canadian National Industrial Design Council, Rotaflex of Canada Ltd won eight out of nine awards for lighting fittings. This is the first time any one manufacturer has received so many awards in this annual event (although the firm has been established in Canada for only two years, and has nine months' manufacturing experience in that country).

Members of Canada's NIDC include manufacturers, retailers, designers and representatives of consumer and government organisations.

MISCELLANEOUS

Design consultants in a new town

Doughty Schofield Fran Sutton & Associates, engineering and industrial design consultants, are now operating from Crossway House, Bracknell, Berkshire. The three principals in this recently formed partnership are F. Doughty, metallurgical engineer, H. Schofield, con-





Pick of the Packs

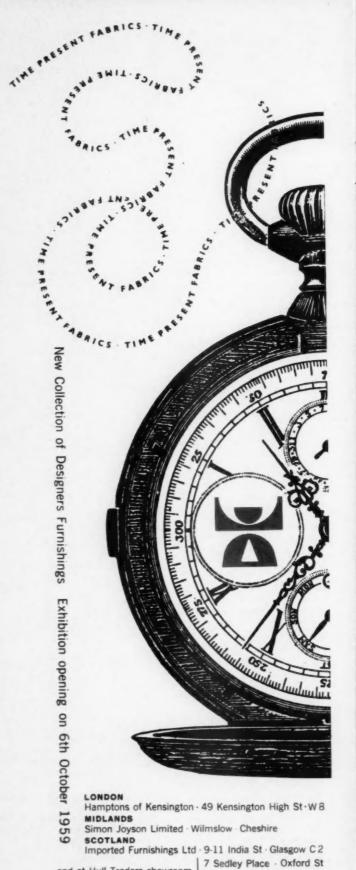
Two of the package designs to be included in Pick of the Packs, an exhibition which will be on show at The Design Centre from October 12 - November 7. The Yardley bottle is one of a range of new packs; the Sprayclean Aerosol was designed by James Main for Durasone Ltd. Some of the other packs included in the exhibition were illustrated in Packaging Demanda Vigoux, the third in the Graphic Design series published in DESIGN September pages 42 - 47.

sulting engineer for automation, and R. Fran Sutton, who has for many years been concerned with graphics and more recently with product design. They have recently been joined by John Prudden who is responsible for keeping in close touch with clients. Among work currently in hand are brochures for Southern Instruments Ltd, a marketing development for specialised products for Floris Bakeries Ltd, and a redesign of the Gardenmaster for Landmaster Ltd. In addition to product design the firm is equipped to handle promotional activities including marketing and publicity connected with any project.

Cheaper blinds

A new company called Venetian-Blind Specialists (Seawright) Ltd, is to bring "the Venetian blind continued on page 67





and at Hull Traders showroom

London W 1 · Mayfair 7153

within the reach of everybody's budget". The address of the new company is Station Approach, Waltham Cross, Hertfordshire.

Britain's babies

Since DESIGN tested the Triumph Herald, which forms the subject of the Design Analysis article on pages 38 - 46 of this issue, the British Motor Corporation has launched its two new miniature cars, the Morris Mini-Minor and the Austin Seven.

These BMC cars incorporate new features which, at the time the *Herald* was announced, had seemed revolutionary, and bear out the statement made by Stirling Moss in the leading article of this issue (page 27) that the *Herald* is, in fact, only the first of a new generation of British cars.

The use of independent suspension on all four wheels is perhaps the most significant feature of this new generation of cars. Alec Issigonis, who headed the team



The Mini-Minor

of designers which created the Mini-Minor and the Seven, has achieved outstanding performance from the 850-cc, 4-cylinder engine which is mounted in the transverse position and drives the front wheels. DESIGN's correspondent who tested the cars recently reports: "These cars are identical except for the grille treatment. Their handling and performance are impressive and it was possible to reach over 80 mph, even though 75 mph is quoted as their top speed. Cornering was exceptionally good and one could go round a sharp bend at 70 – 75 mph with confidence. The ride was comfortable even over rough surfaces and there seemed to be plenty of room inside. Acceleration was excellent both in top gear and through the gearbox, and visibility all round was good."

The cars are being produced in this country at first in the *de luxe* versions selling at £537 6s 8d. The standard version, initially only for export, will cost £496 19s 2d.

Room for furniture

The London Furniture Manufacturers' Association is planning to open a permanent showroom in London where furniture manufacturers will be able to display their designs permanently. It is hoped that it will be possible to open the centre in 1961; it will be open to the trade only.

London office

Weather Oak Press Ltd has opened a London office at 83 Eaton Place, SW1.

LETTERS to the Editor

Sales before safety?

sir: At this moment there is, lying in stock at a dealers, an electric fire which will more than burn the fingers of a young child. The same is true of an oil heater which is destined to set fire to someone's home.

These were just two of the sobering facts which were brought to the attention of members of the Society of Industrial Artists by Barbara Naish, who gave a talk on Home Accidents and Domestic Design on behalf of the Royal Society for the Prevention of Accidents, in London recently.

As an SIA member who was present at the talk and subsequent discussion, it seemed clear that in many cases, manufacturers hesitate to embody safety features as they fear that sales appeal will suffer. This is not necessarily true, as the designer who is aware of the risks can embody these features in an attractive design so that the customer buys safety without realising it.

Of course, with some appliances the task is not easy, but surely this is a challenge which the industrial designer is ready to accept?

KEN PALMER
12 Doyle Gardens
Kensal Rise
NW10

Dignity before comfort?

SIR: It is difficult to imagine a more inexact statement than the remark of Kenneth Robinson in the last paragraph of his Pointers (DESIGN May 1959 page 25) where he says that the University of London Library is an example of "how traditional prettiness and dignity were considered before the comfort of readers and staff". Mr Robinson suggests that those interested should visit the University Library and see for themselves the truth of his statements. I would extend a cordial invitation to those interested to visit our library to see how unfounded Mr Robinson's statements are.

J. H. P. PAFFORD Goldsmiths' Librarian University of London Library WC1

BOOKS

Industrial design in the United States

The European Productivity Agency of OEEC, HM Stationery Office, 10s

This book is a joint report of a mission consisting of 26 experts from Europe who studied the "function, organisation and methods of industrial design in the engineering industry" in the United States.

It is full of information about the origin and function of industrial design, the organisation of design in industrial firms, methods of work, industrial design



Big extrusions

The Harvey Aluminium Company of America claims that it is now producing the widest aluminium extruded flat section in the world. Using a 12,000 ton hydraulic press, the integrally stiffened penels are extruded on a production basis in alloy 7178 for final machining into structural wing components.

Some of the more recent uses for these extrusions are curtain walls, ship decking, missile bodies, and materials handling equipment, etc.

education, how the design profession is organised and the influence of design on sales and productivity.

The mission travelled for six weeks through the United States in the autumn of 1955 gathering facts and information. I know of no other publication which has brought together so many views on the industrial designer and his contribution to industry, be he a consultant or employee. If you select the pertinent facts from irrelevant facets, constructive thoughts from superficial statements, the report constitutes a very useful handbook on American practice of design, what has been achieved and what are current aims.

This unevenness may give a true picture of industrial design in the United States today, but as the purpose of the publication is to show "to the European public, whether manufacturers or consumers, how America looks on industrial design in order to increase sales and productivity", the publication would have been more useful if it had been edited by a professional. But this may be the weakness of a report written by a fact-finding mission rather than by an individual. Also, the illustrations are rather poor, both in quality and subject matter; as much better examples of US industrial

continued on page 69





P.M. CROSS

TIOXIDE pigments for lively colours

BEAUTIENT TINTS AND BRILLIANT WHITES FOR MODERN PRODUCTS
COME FROM TIOXIDE THE FINEST WHITE PIGMENT IN THE WORLD
FOR HIDING POWER HRIGHTNESS DISPERSABILITY AND LONG LIFE

British Titan Products Co Ltd

design performance are available, the absence of an editor is doubly regrettable. Nevertheless, anyone interested in design should read this book as he will certainly find some information relevant to his problems.

It is not, however, easy to agree with all points of view expressed, nor with the definitions of design given by various authorities. A chief designer of one of the largest companies of the United States contributed the following definition, which in my view was hardly worth exporting to Europe: "Industrial design is that technical activity whose prime objective is the creative application of the funds of scientific knowledge and lore in the physical sciences, visual arts and human engineering, and its integration with engineering, manufacturing and marketing categories of product conception and determination to satisfy the needs and requirements of people". This merely states the obvious with maximum obscurity.

The definition of another leading practitioner may be good sales talk to re-assure clients but hardly a criterion of what is good and what is bad design, when he says "We believe that a design is good when it helps attract people to buy, and the design is bad when it tends to repel people from buying. The question of whether or not there is a single standard of appearance or taste or aesthetics that is true of all times and all people is an academic one. Design in our view is a tool of marketing, as is a salesman, as is advertising. To the extent that industrial design contributes to sales, to that extent design is good".

No one from this country was invited to join the mission (presumably because in 1952 a British team carried out a similar tour under the auspices of the Anglo-American Council on Productivity, and produced the report Design for Production). However, among the establishments in Europe dealing with industrial design no mention is made of the CoID – an inexplicable omission, since the Council's unique terms of reference and its pioneering efforts over the last 14 years have to some considerable measure achieved in this country what the OEEC mission tries now to advocate for Europe.

F. H. E. HERRION

Modelmaking for industrial design

Ralph R. Knoblaugh, McGraw-Hill, £3 15s

This is not a complete manual of modelmaking, but something much more useful, a professional modelmaker's notes on parts of his craft that are not well known or understood. The book takes the stance that "because the industrial designer is selling appearance as well as function, his client, the manufacturer, must be able to see the 'idea' from every angle – and for this the model is the only answer".

A fair amount of space is given to introductory matters, like setting out and the use of tools for laying off angles, and the range of equipment necessary to a model shop. Much of this is elementary, and so is nearly all the comment on wood working and metal working techniques, but it gives a good overall picture as a guide to the cost of setting up a model shop and the skills to be looked for in modelmaking staff.

The bulk of the work, however, deals with the handling of plaster of Paris, and here it is of great value. The casting and reinforcing of plaster is a sculptor's sub-craft, and a reasonable competence can be gained at most art schools. An industrial designer or a development engineer, however, will usually wish to offer a drawing as an original, not a clay model; and



UNESCO gift room

The furniture and furnishings of this room (the office of the president of the Executive Board of UNESCO was presented to UNESCO "on behalf of the people of the United Kingdom".

The committee which organised the gift was under the chairman-

thip of Leslie Julius of S. Hille & Co Ltd, who came to the rescue when it seemed that Britain would not be represented in the new building (DESIGN May 1958 page 22). Robin Day supervised the interior design of the room.

the model maker must work as directly as possible, with precision to check the accuracy of the information, and with no time for extensive carving or preliminary modelling. The right technique is often wet forming, such as is used for running plaster mouldings or picture frames. This is a somewhat esoteric craft. It is not easy to watch it being practised, and nothing comprehensive, so far as I know, has been written before this.

Mr Knoblaugh takes wet forming as a basic model maker's technique, and then shows how plaster sections can be run with curved forms and with some quite complex textures.

Two especially helpful chapters deal with the use of various wet run plaster profiles assembled together with dry formed and carved work, joinery, metal parts, and existing components.

No mention is made of urea adhesives to produce thin sections of great strength, or of the wide range of characteristics in dental plasters, or even of the rubber mixing bowl. The author believes in using straight gypsum plaster in a traditional manner, and within this scope there is no parallel source of information.

One might infer that models are chiefly useful for the pomp of presentation to the client. Most work that comes to a professional model maker will be of this kind, requiring careful statements in full verisimilitude of the appearance of the finished product. When an industrial designer works as a member of a team (which he will do in this country, whether he is a consultant or on the staff) it is often desirable to test the appearance of the product at successive stages in development. It can be argued with some truth that these tentative sketch models, thrown together from

quickly worked materials, are the only ones with design value. The fully realised presentation model is a formal statement of facts that have already been agreed. It is useful in selling the design concept, but its cost, rigidness and finality inhibit free criticism.

A full study of Modelmaking for Industrial Design ought, therefore, to have a companion volume on the techniques of cardboard, paper, balsa, plasticine, etc, with such finishes as flint paper or boot polish as alternatives to paint. Of course, such things are used in designer's models and Mr Knoblaugh is concerned with model maker's models; but we should not forget that very fine work can be done in card alone, and that a model is often most useful when it can free design from the tyranny of the drawing board.

J. BERESFORD-EVANS

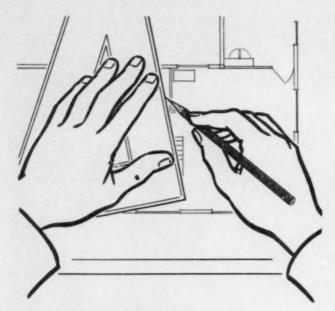
Kunststoffe im Raum

E. Jakubowski and F. Nissch, Verlag Callwey, Alec Tiranti Ltd, £418s

Plastics and synthetic fabrics have reached a stage when they have become a design medium very much in their own right, and no longer need to be regarded as ersatz. Their incredible wealth of possible form and texture, from solid and self-supporting slabs to finest tissues, opaque to translucent and transparent, high gloss to dull matt, porous or dense, tough and practically indestructible to resilient and pliable, are far from being fully known and utilised by architects and designers.

They are the subject of a comprehensive book on plastics in the interior. It is a technical text book on the composition and manufacture of architectural plastics, their application shown in the form of 50 pages of

continued on page 71



"To a chap like me – and I'm proud of my work – my pencil's my living.

The pencils I use have to stand up to fast hard work, their grading's got to be absolutely spot on – not almost or nearly but bang on the dot every time.

The leads must hold their points
and flow smoothly throughout a long line
no crumbling or 'clinkers' mark you!
and if I erase a line it must go cleanly—
there's no 'furrow' left in my paper
so you won't find ghost lines in prints
made off my drawings. As a matter of
fact you can tell from a print when it is
my drawing—the print's always first class."

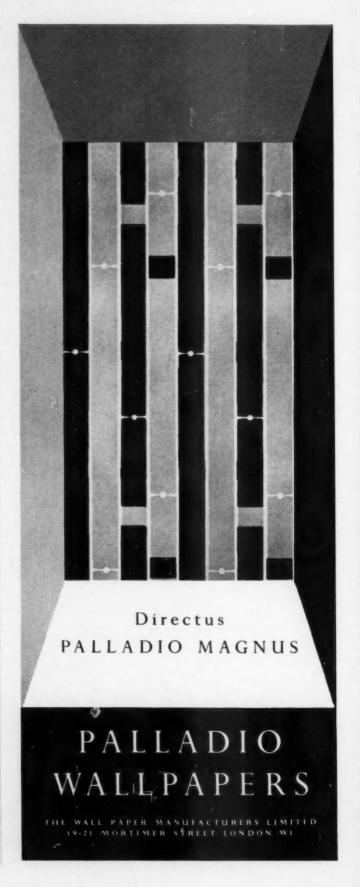
"What pencils do I use?"

"Venus drawing pencils of course, the ones with the crackle finish! – how else do you think! keep up my high standard?"



* VENUS Drawing Pencils are made in 17 accurate grades from 9H to 6B.

THE VENUS PENCIL CO., LTD., LOWER CLAPTON ROAD, LONDON, E.S.



extremely clear working details with about 150 pages of photographs, many in colour, organised according to the main uses, ie floors, walls, hangings, fittings, stair treads, etc.

Except for a fairly substantial foreword and the captions to the photographs which are also in English and French, the text is in German. This fact need not deter the English reader. The diagrams of the manufacturing processes use international scientific terms such as polyvinylchloride (pvc) and the numerous tables can be easily understood. These are especially useful as they represent a quick reference. The tabulation is according to product, grouped in countries, technical classification, structure, form in which available, form of application, adhesives where needed, and although the majority of firms mentioned are German, by referring to the technical classification it should be quite possible to find British equivalents.

After all, a familiarity with the properties of plastics is important for their selection, and the book stresses this fact as a particular necessity for the designer, an injunction we should not be unfamiliar with concerning more traditional materials!

The thoroughness is astounding and typical of what one would probably expect from a German treatise; for instance the velocity of saw cuts is given for the cutting of foam polystyrol slabs.

Attention is drawn to scores of often unexpected applications; for example, the electrical insulation properties of plastics for use on decorative heating elements and their extreme resistance to wear and fading.

The low inflammability of plastics obtained nowadays allows a rich application for wall treatment in theatres and cinemas as almost any colour and texture can be obtained (interesting forms of stretching and padding are shown); acoustic properties can be manufactured at will from high absorbency through all ranges of frequency to complete reflectivity.

However, only two British examples seem to be shown – an acoustic wall treatment, which is more remarkable for its attractive light fittings, in the Cinephone Cinema, Birmingham – and some office partitioning in laminated plastics. Why this reluctance?

H. WERNER ROSENTHAL

The collected writings of Alvin Lustig

Edited and published by Holland R. Nelson, In, New Haven, Connecticut, USA, \$3.50

This is a book not only of writings but also of talks which Alvin Lustig gave at various times. They are not apparently in chronological order, and one would have welcomed a few editorial notes giving the background and some idea of the context in which each essay was conceived.

As is so often the case when an intelligent man talks or makes personal notes rather than 'writing' in a literary sense, the ideas follow fast one upon the other. Personal notes can be, and usually are, abbreviated to their barest essentials, and a talk delivered at a conference or an essay written for a particular purpose presupposes that the audience is aware of that purpose. Many things which would otherwise have to be qualified or explained can justifiably and necessarily be omitted, and some things which in another context might be considered self-evident may have to be included.

Nevertheless, Lustig's seriousness, clear-sightedness and lack of pretension are exemplified in the first

chapter - a lecture which was announced as: Designing, a process of teaching. With the first few words Lustig removes the comma and proceeds to give a lucid account of the underlying problems and concepts of art education.

He simplifies but avoids the over-simplification which can so easily become a cliché, and agrees with



Alvin Lustig

Louis Sullivan that what is needed is "a rule so broad as to admit of no exception". Again quoting Sullivan he says: "The concept that 'the solution of the problem lies within the problem itself' is essentially a democratic way to approach the whole problem of living" These are stimulating ideas, and all the time he seems to be searching to establish the relationship between the painter, whose role, he says, is that of "a pure scientist in formal research", and the designer, for whom design is a "total activity". His chapters on Design Program for the University of Georgia and Experimental Workshop in Graphic Design for Yale University translate these ideas into concrete proposals, and the typographical department is defined as the "design control center for every piece of graphic design". This devotion to typography is further clarified in his chapter on Contemporary Book Design, which precedes his interesting appreciation of The Architectural Review. One rather wonders, however, what he would have thought about the typography of this book

HANS SCHLEGER

Colorvogue colour scheme selector

John Hall & Sons Ltd, 1s 6d

The eye of the home decorator, searching the shops for this or that article in the 'right' colour, is assaulted from all sides by a compromising medley of shades and patterning. One has the impression that under cover of such phrases as "bold colours are fashionable", many manufacturers are vying with each other as to which can hit the public's eye the hardest.

It is some relief to find that one firm at least – John Hall & Sons, a paint manufacturer – is aware of the difficulties confronting the consumer. In an album called the Colorvogue Colour Scheme Selector, the firm offers short cuts to harmonious combinations of colour. This album contains large swatches of 36 paint colours and a booklet, copiously illustrated with colour sketches, suggesting what colours to use with a given floor, curtains, paint or other 'key' colour in a room.

Unfortunately, Colorvogue disregards one vital way of simplifying the consumer's problems. Its range of paint colours apparently takes no account whatever of British Standard 2660: Colours for Building and Decorative Paints, the systematic range of 101 colours sponsored by the RIBA and by the paint industry itself to cover all normal needs. This is a pity. The Standard has already done much good work in drawing together

the colours not only of paints, but of many other materials. It ought to be more widely recognised that, in the end, colour harmony in the home depends on harmony between the colours in which products are offered.

Colour photography No 1

Editor Edward S. Bombach, Fountain Press, 2s 6d
The appearance of a magazine devoted entirely to colour photography heralds a new outlook in our formerly all-too-grey photographic world.

The amateur's initial excursions into the field of colour photography are not likely to gain him any aesthetic laurels. To understand colour and be aware of its possibilities as well as its dangers, takes time and thought, and some guidance, and this is where a magazine such as the newly-launched Colour Photography might be helpful.

Its first issue is, on the whole, promising both in subject matter and quality of reproduction.

It is sad to learn, however, that one of the editor's favourite subjects is table-tops. Whether these are represented by something as trite as the doll on the cover or the romanticised Chinese traveller on page 30, they are surely an aberration of taste. How much more rewarding to use the camera as an extension of the human eye in the discovery of existing forms and patterns, abundantly found in nature; to create by selection rather than by laboured construction. FRED LAMMER

This month's cover

This month's cover was designed by Heinz Kurth, 36, who studied painting and graphic art at Hamburg and Cologne. He has been a free lance graphic designer since 1953, working on posters, advertisements and direct mail design. One of his advertisements for W. H. Smith & Son was featured in Graphic Design 2 (DESIGN June page 24).

MANUFACTURERS in this issue

AEC Ltd, 49 Berkeley Square, w1 Air-Rail Ltd, 36 Ashley Gardens, sw1 British Motor Corporation, Longbridge, Birmingham Clyde Manufacturing Co Ltd, Clyde Works, Radford, Nottingham

Donald Bros Ltd, Old Glamis Factory, Dundee Edinburgh Weavers, 102 Mount St, w1 English Electric Co Ltd, Marconi House, Strand, wc2 Harris & Sheldon Ltd, Stafford St, Birmingham 4 Henderson, Morton, Inglis & Co Ltd, Newmilins, Ayrshire S, Hille & Co Ltd, 1484 St Albans Rd, Watford, Herts I CI Ltd, Imperial Chemical House, Millbank, sw1 Leyland Motors Ltd, Leylands, Lancs James McInnes & Co Ltd, Campbell St, Darvel, Ayrshire McInnes Textiles Ltd, West Edith St, Darvel, Ayrshire D. Meredew Ltd, Dunhams Lane, Letchworth, Herts Morton, Young & Borland Ltd, Stoneygate Rd, Newmilns,

Ayrshire
Park Royal Vehicles Ltd, Abbey Rd, NW10
The Shannon Ltd, Shannon Corner, New Malden, Surrey
Simplex Electric Co, Broadwell, Oldbury, Birmingham
Standard-Triumph Group, Canley, Coventry
Venetian-Blind Specialists (Seawright) Ltd, Waltham Cross,
Herss

Vetrona Fabrics Ltd, 90 Great Bridgewater St, Manchester 2 John Waddington Ltd, Wakefield Rd, Leeds 10

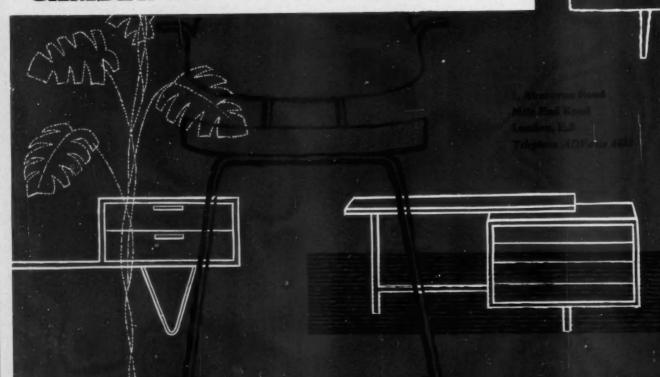
DESIGNERS in this issue

Misha Black, Obe, RDI, Fela; W. B. Brown, Mela; Robin Day, Fela; Martin Grierson, Lella; Jacqueline Grosg, Fela; F. G. Hobden; Bernard Holddaway; Alec Issigonis; Heiax Kurth, Mela (cover); John Lowe; John Lunn, Fela; James Main; Giovanni Michelotti; Mary de Saulles, Addip, Ariba, Fela; Olive Sullivan; Keith Townend, Deseca.

Contemporary design for every occasion

When you are designing an exhibition want of the region of the light wast came of brilliantly designed to a support of the region of the regio

CAMDEN FURNITURE HIRE Limited





VISCOUNT

A striking design in Black & Gold and Black & White from the Equerry (Regd.) range of Wilton Filling.

- Choice of three grades
- All-woollen pile
- Guaranteed mothproof for life
- Accepted by the Council of Industrial Design for Design Index

stockwell carpets

If you would like to know more about Equerry, a warm welcome awaits you in our Grafton Street Showrooms: or, for further particulars, please write to S. J. Stockwell & Co. (Carpets) Ltd., 16 Grafton Street, London, W.1. Telephone: GROsvenor 4161.



Contemporary design for every occasion

When you are designing an exhibition stand or scatting a conference you must consider Caredon Furniture

fire. There is a vast range of brilliantly designed contemporary furniture for your relection. Send for our current price his and illustrated catalogue, you will find the latter an ideal reference for furniture problems.

CAMDEN FURNITURE HIRE Limited

1, Aberavon Road Mile End Road London, E.3



VISCOUNT

A striking design in Black & Gold and Black & White from the Equerry (Regd.) range of Wilton Filling.

- Choice of three grades
- All-woollen pile
- Guaranteed mothproof for life
- Accepted by the Council of Industrial Design for Design Index

stockwell carpets

If you would like to know more about Equerry, a warm welcome awaits you in our Grafton Street Showrooms: or, for further particulars, please write to S. J. Stockwell & Co. (Carpets) Ltd., 16 Grafton Street, London, W.1. Telephone: GROsvenor 4161.





'The Chilterns', a poster designed for London Transport by A. Rossiter. It is one of the series of full colour prints of famous London Transport posters, which includes the work of Edward Bawden, R.A., John Minton, E. McKnight Kauffer, and many others. The average size of the prints is 6" x 5". They can be obtained, price is. each (postage 3d.) from the Publicity Officer, London Transport, Griffith House, 280 Marylebone Rd., London, N.W.I.



AN Ian Henderson

"SPECIAL"

The furnishing of the Solarium at the Connaught Rooms, Kingsway, was designed and executed by Ian Henderson Ltd. Besides the settee illustrated, tables, chairs and light fittings etc., were all specially

lan Henderson Ltd. are equipped to deal with any furnishing or problem of interior decoration from the small town flat to the country mansion or modern office block, including panelling, fitments, fine carpets and beautiful textiles. Furnishing schemes carried out to the requirements of architects and interior designers, or to lan Henderson's own design.





Ian Henderson Ltd 184 SLOANE STREET LONDON, S.W.I

BELgravia 3271/2

(200 yards from Knightsbridge on the left)

Beresford & Hicks of London





BY APPOINTMENT TO H.M. QUEEN ELIZABETH II UPHOLSTERERS AND SUPPLIERS OF FURNISHING MATERIALS

The Boardroom of the

Lewis Investment Trust Ltd

Table boat sided, 26'0" long, 6'6" wide on centre line tapering to 3'6", lined Fir Green Leather. Walnut Chairs upholstered Cinnamon coloured Hide, Gold Liver Bird crest.

Enquiries for Individual Schemes in Contemporary or Traditional design are invited

BERESFORD & HICKS Curtain Road, E.C.2.





FLAMINGO

selected as a

design of the year 1959 by the

Council of Industrial Design



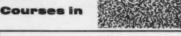


Diploma in Architecture
A R I B A
Diploma in Building
A R I C B



City of Leicester Education Committee

for Full Time Courses in





ARCHITECTURE

AND BUILDING





Leicester College of Art



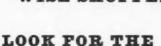
Building & Quantity Surveying
Three years
Ordinary National Diploma



22 Union Road, Clapham, S.W.4 MACaulay 2215/7

"Wynstones"—a new Fotexurprint designed by Tibor Reich, F.S.I.A., and produced by Tibor Ltd., Stratford-on-Avon.—Curtain Fabric in Pure Cotton—available at approximately 13/6d. per yd. from the leading stores. See the complete Tibor range at our London Showrooms: 8, Old Burlington Street, London, W.1.

WISE SHOPPERS





DESIGN CENTRE LABEL

Will they find it on your product?

For details of this label, which is available for goods displayed in The Design Centre, write to Major-General J. M. Benoy The Design Centre 28 Haymarket, London SW1



CHANDELIER No 02 Waterford Chandeliers BULB SCALE (approx)

> WATERFORD GLASS LIMITED, WATERFORD, IRELAND Enquiries for Britain, Australia and New Zealand should be directed to the Sole Agents J. WUIDART & CO. LTD., 15 RATHBONE PLACE, LONDON, W.1

Beautifully hand cut from full lead crystal, Waterford Chandeliers are available in sizes suitable for modern interiors. Chandeliers can be supplied from stock in original Waterford designs or in new designs in the highest Waterford Waterford Glass are also glad to make up chandeliers to architects' own specifications. Particulars of this service will be sent on request.



Relax in the lap of **EFFICIENCY!**



DE LUXE MODEL V. 26

As all executives know only too well, and too often ignore, hustle and bustle is not a true indication of efficiency. A correctly relaxed body encourages an orderly mind. Creative alertness is so important in these highly competitive days when so many of us in the nature of things, must "take it sitting down".

Tan-Sad seating is designed to produce this calm yet dynamic efficiency.

THE TAN-SAD CHAIR CO (1931) LTD LINCOLN HOUSE 296-302 HIGH HOLBORN LONDON WC1 Telephone: CHAncery 9231/7



PC 181. NEW DESIGN TOWEL RAIL in anodised aluminium with heavy white porcelain rail. Secret fixing on two solid nylon cleats by two screws only. Rustless, precision made, beautifully finished. Length 21". Suitable for domestic or contract use. Trade and contract enquiries invited.

PETER CUDDON

DESIGNERS & MANUFACTURERS

54/56 PRINCESS VICTORIA STREET, CLIFTON, BRISTOL 8 BRISTOL 34029

at point of sale!

OAK or MAHOGANY DISPLAY

CABINETS **SHOWCASES** Instantly DISPENSERS

accepted

by all

Retailers!

Manufacturers, let us quote you for your own requirements. You will find, like many others that the de-luxe setting obtained at a low cost will

Write today for full details to:-

SEND SALES SOARING

ASSOCIATED SALES AIDS RIVERSIDE ROAD, WATFORD, HERTS. Watford 25273



Classified advertisements

Rates: 1s 3d per word (minimum, 20s). Box numbers, 1s extra

Copy: Last date for copy is 10th of month preceding date of issue

SITUATIONS VACANT

THE COUNCIL OF INDUSTRIAL DESIGN requires an Exhibitions Assistant, man or woman, 21 – 30 to help with the planning and display of exhibits in The Design Centre. Qualifications: good general education and some artistic training. Starting salary £535 – £690 according to age and qualifications rising to £985. 3½ weeks holiday a year. Pension scheme. Please write giving details of age, education and posts held, with dates, to The Establishment Officer (D59), 28 Haymarket, swl. Trafalgar 8000.

CITY OF BIRMINGHAM EDUCATION COMMITTEE COLLEGE OF ART AND CRAFTS

Principal: Meredith W. Hawes, ARCS, ARWS, NRD SCHOOL OF INDUSTRIAL DESIGN

Head of School: N. J. Slutzky, Hon DesRCA

A full-time Lecturer in Product Design is required in the School of Industrial Design of the College, to train students up to the Ministry of Education's National Diploma in Design. Experience as a practising designer in metals and/or plastics is essential and applicants should have had adequate art training. To commence duty as soon as possible, in the Autumn Term. Salary in accordance with Burnham (Further Education) Scale of Salaries for Lecturers; Men: £1,260 × £31 10s - £1,417 10s; Women: £1,008 × £25 4s - £1,134 plus equal pay increments. Further particulars and application forms may be obtained from the Principal, College of Art and Crafts, Margaret Street, Birmingham 3 (sae). Closing date: November 30 1959.

YARDLEY & CO LTD require an experienced creative designer for their Perfumery Packaging & Display Studio. Applicants must be able to develop and finalise designs. Applications should be addressed to Mr A. E. Hart, Yardley & Company Limited, 33 Old Bond Street, London w1, stating age, education and experience.

EAST SUFFOLK COUNTY COUNCIL

BOROUGH OF LOWESTOFT COMMITTEE FOR EDUCATION LOWESTOFT SCHOOL OF ART AND CRAFTS

Required immediately part-time teacher of Trade and General Bookbinding to City and Guilds Final Standard. One half-day and two evenings per week. Apply to the Principal, Lowestoft School of Art and Crafts, Morton Road, Lowestoft, giving full details of qualifications and experience.

COUNTY COUNCIL OF DURHAM

THE BOWES MUSEUM, BARNARD CASTLE

Museum Assistant (Textile). The Museum contains one of the most important provincial collections of tapestries, as well as examples of embroidery and other textiles. The post will be concerned with cataloguing, care and arrangement of this material, but opportunities will be given to gain experience in other classes of material. Candidates should have a University Degree and/or the Diploma of the Museum Association. Salary APT 1 (£610 - £765). Further details and form of application (returnable by October 30 1959) from G. H. Metcalfe, Director of Education, Shire Hall,

DRAUGHTSMEN required for Consultant Design office for work on a wide range of engineering and domestic products, exhibitions, shops and interiors. Write stating

age and experience to David Ogle Associates, 1 Market Place, Stevenage, Tel 2220.

GRAPHIC DESIGNER required for packaging, layouts and general typography related to product design and exhibition work. Write stating age and experience to David Ogle Associates, 1 Market Place, Stevenage, Herts. Tel 2220.

INTERIOR DESIGNER (male), trained Art School, required as assistant. Age, experience, salary required, in writing to: Gaby Schreiber and Associates, 7 Hobart Place, sw1.

QUALIFIED DESIGN and Development Engineer, preferably BSC, required to work on the invention, design and development up to and including the production stage of all forms of Heating and Cooking Appliances. Excelent prospects for man of energy and imagination with practical experience in these lines. Box 393, DESIGN, 28 Haymarket, London sw1.

SITUATIONS WANTED

YOUNG QUALIFIED furniture designer leaving Forces mid-November seeks post where initiative and hard work bring their due reward. Box 392, DESIGN, 28 Haymarket, London swl.

FURNITURE DESIGNER, LSIA, 28, with sound knowledge of construction and experience in domestic, office and boardroom work seeks position with a good company. Box 384, DESIGN, 28 Haymarket, London sw1.

COMMISSIONS & DESIGNS WANTED

INTERIOR DESIGNERS, decorators, soft furnishers seek smaller contracts where imagination and craftsmanship

are valued. Maurice Brown, ARCA, NRD, 27 High Street, NWS, PRI 3516.

DRAWING OFFICE overworked, or non-existent? Alpha Engineering Designs offer design and drawing office service. 66a Woodside Park Road, London N12.

MISCELLANEOUS

FURNITURE SPECIALS: for the short run try Yew, Cherry, Plane, Elm or Sycamore. Albert Turner & Son Ltd, 35 High Street, Lewes. Telephone Lewes 520.

PICTURE FRAMES of all types made. The largest stock in London. Rowley, 86–87 Campden Street, Kensington. Telephone Park 4349.

SHIPPING & PACKING

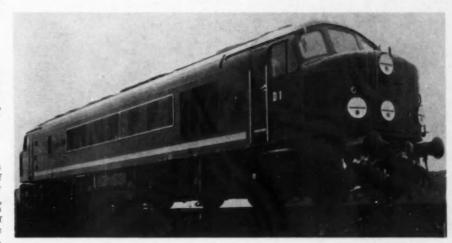
INTENDING EXHIBITORS at European Fairs should contact Davies Turner & Co Ltd, 4 Lower Belgrave Street, London swl, stoane 3455, for details of DIRECT ROAD SHRVICE.

PROTOTYPES & MODEL MAKING

METAL-WIRE-TUBULAR WORK. Let us manufacture your prototypes and/or production runs. Holborn Metal Works, 334 Upper Street, N1. CAN 8042.

RICHARD DENDY & ASSOCIATES welcome your enquiries for architectural, engineering, experimental and ship models; production runs of advertising units in rubber, plastics, wood or metal; prototypes in all materials;

Classified advertisements continued overleaf



Record of Designers

Diesel-electric locomotive, 2,300 hp, the most powerful of the present development programme. Bodyform designed by Jack Howe, who was recommended by the Record of Designers, for the British Railways' Locomotive Works, Derby, in collaboration with its engineering staffs. Manufacturers and others wanting design consultants or staff designers can apply for a short list (requirements must be stated in some detail) to the Record of Designers, CoID, 28 Haymarket, London SW1, or to the CoID, Scottish Committee, 46 West George Street, Glasgow C2.

CLASSIFIED

advertisements

continued from page 79

giant exhibition and carnival displays. 4, 5 and 6 Seaton Place, Hampstead Road, London NW1. BUSton 7617 and 1981.

WESTWAY MODELS LIMITED - the largest model-making organisation in the United Kingdom specialising in models for display, exhibition, product design and prototype-development. 178 Brent Crescent, London NW 10. Telephone ELGar 3267-8.

PARTRIDGE'S MODELS LIMITED, established 1921, specialise in prototype and development work in any suitable material. Close collaboration with foremost industrial designers and injection moulders ensures speedy and satisfactory solutions. 14 South Wharf Road, w2. PADdington 4653.

PRINTING AND PUBLICATIONS

RINGS NORTON PRESS (1947) LTD. Fine colour Printers have installed yet another Precision Letterpress Printing Machine to meet increasing demands. Our design service is available for submission of ideas, for Leaflets, Brochures and Catalogues, either by Letterpress or Litho. Specimens available from, Factory – Kings Norton, Birmingham 30. Telephone: KINgs Norton 2262. London Office – Stuart House, 1 Tudor Street, London 8c4. Tel: Fleet Street 1379.

ADVERTISERS in this issue

ADVERTISERS	MES 13:	146	
AEI Lamp and Lighting Co Ltd	***	***	3
Allom Heffer & Co Ltd	***	***	62
Associated Sales Aids	12.6	***	78
Atlas Lighting Ltd		***	11
St. 6. 11. 1. 1	444		60
W C . L C. CO. L.	***	***	75
0	KK K	EEE	
British Aluminium Co Ltd. The	***	***	
British Titan Products Co Ltd	488	157	cover III
	24.4	***	68
Brookes & Adams	***	444	16
Camden Furniture Hire Ltd	227	***	72
Cuddon, Peter	25.6	226	78
Donald Brothers Ltd	224	444	21
Finmar Ltd	***	275	73
Firth-Vickers Stainless Steels Ltd	***	204	2
Formica Ltd	***	X.8.4	23/64
General Electric Co Ltd, The	***	***	cover 11
Hargreaves, S. & H. Ltd	886	***	80
Harvey, G. A. & Co (London) Ltd	***	***	14
Heal Fabrics Ltd	***	***	17
Hegerty & Merry	***	***	77
Henderson, Ian Ltd	***	***	74
Hille Contract Division	55%	***	26
HK Furniture Ltd	***	***	62
Hull Traders	***	***	66
Imperial Chemical Industries Ltd	***	***	15/24
Lascelles & Co Ltd	***	488	75
Leicester College of Art	***	***	76
London Transport	***	***	74
Lumenated Ceilings Ltd	***	***	4
Marley Tiles Ltd	***	***	9
Mason, E. N. & Sons Ltd	***	***	7
North British Rubber Co Ltd, The	***		18
Orient Line		***	66
Deleveless			10
D C 1 . 4	24.8	***	74
Date day (Ca Delania) I ad	***	***	10
Sanderson, Arthur & Sons Ltd	***	***	
	***	***	12
Shell Chemical Co Ltd	25.5	***	8
	882	***	1
Steel Company of Wales Ltd, The	***	***	22
Stockwell, S. J. & Co (Carpets) Ltd	***	441	73
Tan-Sad Chair Co (1931), The		***	78
Tibor Ltd	***	***	76

Troughton & Young	Light	ing) Ltd		***	***	20
United Ebonite & Lor	ival I	.td	***	***	***	13
Venus Pencil Co Ltd,	The	***	***	***	***	70
Walkers (Showcards)	Ltd	157	***	***	***	80
Wall Paper Manufactu	irers !	Ltd, The	***	***	70 cov	er IV
Wilmot Breeden	***	141	434	***	200	28
Winsor & Newton		***	× 9 11		***	6
Wuidart, J. & Co Ltd	***	***	***	717	***	77

INDUSTRIAL DESIGN STAFF

Applications are invited for assistants in the Styling Department, Pressed Steel Company Limited, Cowley, Oxford.

Applicants must have thorough art school or industrial design training. A creative ability and an appreciation of automotive engineering is desirable.

Please apply to the Group Personnel Manager as above

Labels by
HARGREAVES
of course!

A label by Hargreaves is a Hallmark of excellence—a permanent reminder of the quality of your craftsmanship

S. & H. HARGREAVES LTD., LABELITE HOUSE GRAYS YARD, JAMES STREET, LONDON W.I Tel: Welbeck 3754/5





DESIGN is published for the Council of Industrial Design, The Design Centre, 28 Haymarket, London sw1 (Scottish Committee: at 46 West George Street, Glasgow c2) by Her Majesty's Stationery Office

K124 SO Code No. 88-1266-59-10*

Printed in Great Britain by Tillotsons (Bolton) Ltd, Bolton and London

FOIL-WRAPPED FOR FRESHNESS



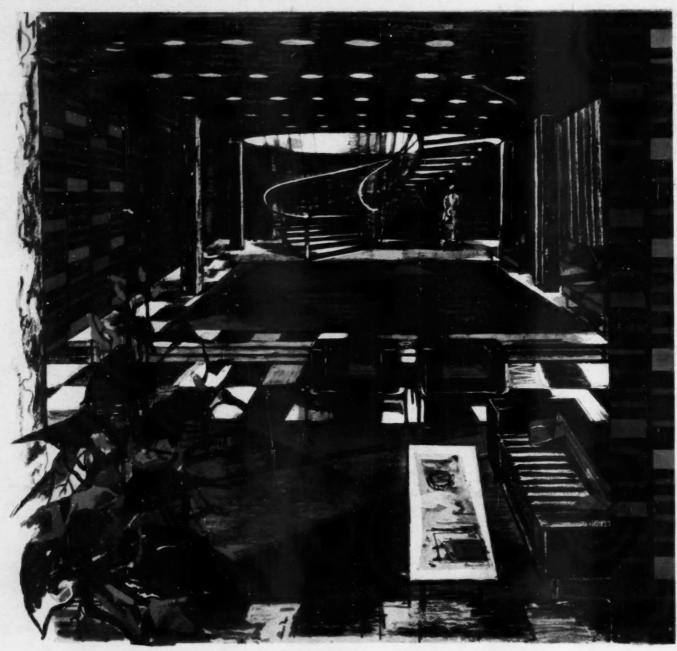
From an oil painting by Leonard Appelbee A.R.C.A.

The BRITISH ALUMINIUM Co Ltd



Suppliers to the Aluminium Foil Rolling Industry

NORFOLK HOUSE ST JAMES'S SQUARE LONDON SW1



WPM MORTIMER STREET

The Architects' Department, formerly at 125, High Holborn, W.C.1, has been reopened in the Company's new London premises at 19/21, Mortimer Street, W.1.

You are invited to visit our spacious showroom on the 1st Floor and to make use of the improved facilities of our special advisory service.

Our artist John Drummond depicts Palladio Magnus wallpaper "Pannus", No. 44452.

FOR ARCHITECTS CONCERNED WITH THE SPECIFICATION OR DIRECTION OF DECORATIVE SCHEMES

THE ARCHITECTS' DEPARTMENT
THE WALL PAPER MANUFACTURERS LIMITED
19/21 MORTIMER STREET LONDON WI
OR KING'S HOUSE KING STREET WEST MANCHESTER 3



